

VOL. 74

NO. 6

Featured in this issue
are accounts of several I.U.N.O.
recent Southern Textile
Association gatherings,
including last month's
convention; see Page 35.

textile bulletin

JUNE • 1948

JUL 1 1948

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in

Spinning Rooms

NON-FLUID OIL outlasts ordinary oil 3 to 5 times

7 out of 10 Spinning Rooms use NON-FLUID OIL because it lasts longer than ordinary oil thereby saving on oil and application costs. Besides, NON-FLUID OIL does not creep, fly or drip from roll necks to damage

yarns and roll covers. This saving in clean yarn alone pays for the cost of NON-FLUID OIL.

Write for Bulletin T13TB and free testing sample of NON-FLUID OIL.

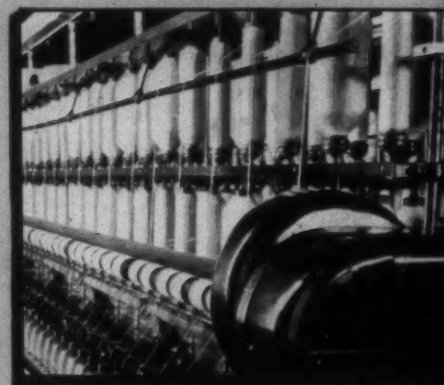
NEW YORK & NEW JERSEY LUBRICANT CO.
292 Madison Avenue, New York, N. Y.

Southern District Manager: FALLS L. THOMASON, Charlotte, N. C.

WORKS: Newark, N. J.

WAREHOUSES: Atlanta, Ga.—Greenville, S. C.—Charlotte, N. C.—
Providence, R. I.—Chicago, Ill.—St. Louis, Mo.—Detroit, Mich.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called fluid grease imitations of NON-FLUID OIL often prove dangerous and costly to use.



NON-FLUID OIL
TRADE MARK REGISTERED

TEXTILE BULLETIN is published monthly by Clark Publishing Co., 218 West Morehead Street, Charlotte 2, N. C. Subscription \$1.50 per year in advance, \$3 for three years. Entered as second-class mail matter March 2, 1911, at Post-office, Charlotte, N. C., under Act of Congress, March 3, 1897.

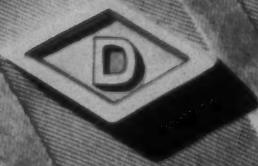
PROVEN PERFORMANCE

FROM SALESMAN'S REPORT
WEEK ENDING...MAR 11 1948

March 11, 1948

2.

Looked over efficiency records and mill had an average for the entire year of 1947 of 96.5% efficiency and 3.12% seconds, running Taffetas and Satins, 3 shifts, 24 hours, 6 days a week. This is on both their XK and XD looms.



DRAPER CORPORATION

"You're Right!"

Your Business Is Different!"



Each business has its own peculiar problems.

That is why Commercial factoring is so flexible—a modern method of financing—suited to your particular needs. Immediate working capital is made available through your accounts receivable. Cash is forwarded to you as shipments are made. Yet you sell on your regular terms. Credit losses and collection expense are assumed by us.

Let us tell you how Commercial factoring increases turnover and profits.

COMMERCIAL FACTORS CORPORATION

Fred'k Viator & Achelis, Inc.
Established 1828

Schefer, Schramm & Vogel
Established 1838

Peierls, Buhler & Co., Inc.
Established 1893

TWO PARK AVENUE, NEW YORK 16

EUGENE G. LYNCH, 80 FEDERAL STREET, BOSTON 10, MASS.
T. HOLT HAYWOOD, WINSTON-SALEM, NORTH CAROLINA



INDUSTRIAL AIR CONDITIONING

Featuring

FLEXIBILITY

ECONOMY

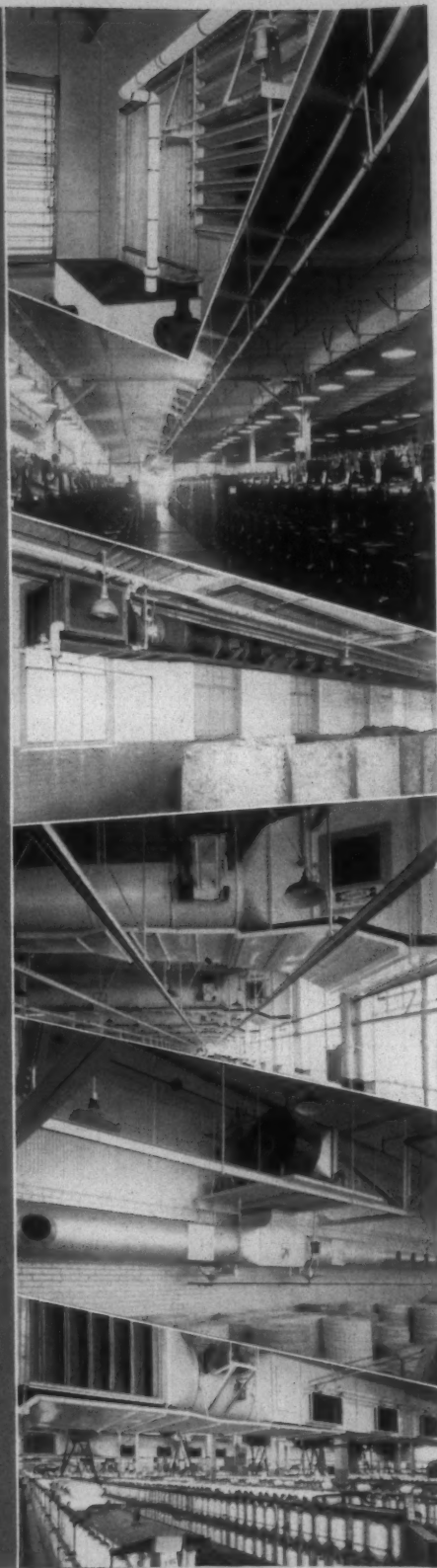
DEPENDABILITY

For 33 years The Bahnson Company has pioneered in the development of industrial humidifying and air conditioning equipment.

At the same time, The Bahnson Company has built an organization of engineers, installation and service personnel which enables us to offer our products as part of a complete air conditioning service.

In tailoring our installations to meet specific problems on thousands of industrial jobs, we have been guided by three principles: Flexibility—Economy—Dependability.

Write for Bulletin No. 333



Bahnson System

AIR CONDITIONING

ENGINEERS

THE BAHNSON CO

WINSTON-SALEM, N. C.

886 Drewry St., Atlanta, Ga.

93 Worth St., New York City

703 Embree Crescent, Westfield, N. J.

553 S. Figueroa St., Los Angeles, Cal.

W. J. Westaway Co., Ltd., Hamilton, Ontario

A-3 Virginian Apts., Greenville, S. C.



All these call for *Condor* WHIPCORD Endless Belts

A flat transmission belt on a drive like this spins around so fast, its life is one continuous "flex". With no straight stretches for a "breather" or slack period, every ounce of this short center belt is under constant load. Only a belt with no plies to separate, no splices to part, can deliver the service needed.

Manhattan belting engineers designed the Condor Whipcord Endless Belt construction to resist just such destruction. Stout Whipcords are endless wound and locked in a matrix of Flexlastics by a method that prestretches the belt during manufacture. This insures against inelastic stretch and constant take-up main-

tenance. Power delivery is positive and constant with a Condor Whipcord Endless Belt.

More than this, Manhattan engineers developed the patented Extensible-Tip cover end-splice that prolongs belt life 3 to 10 times. The cover cannot separate despite constant flexing over the pulleys.

Obtainable in several driving surfaces for special conditions and also in Non-Spark, Oil-Proof types. Manhattan is always ahead in the development of belting. Condor Belts — Compensated, Whipcord Endless, or V-Belts — are always your best buy for long service.

("Flexlastics" is exclusive with Manhattan)

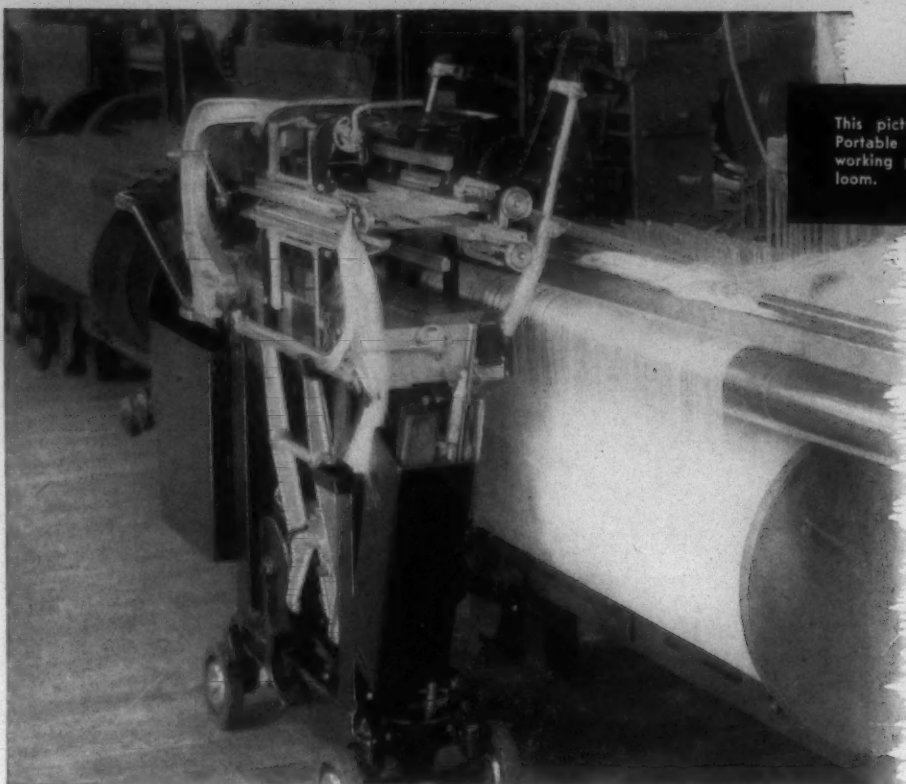


RAYBESTOS - MANHATTAN INC.

Keep Ahead with Manhattan

MANHATTAN RUBBER DIVISION

PASSAIC, NEW JERSEY



This picture shows a Barber-Colman Portable Warp Tying Machine in the working position, directly behind the loom.

BARBER-COLMAN WARP TYING MACHINES ARE BACKED BY 45 YEARS OF EXPERIENCE

DESIGN. Shortly after the turn of the century, Barber-Colman introduced several machines which have proved to be outstanding contributions toward improvement in the textile art. Among them is the Portable Warp Tying Machine, specially designed to work directly back of the loom. This machine is so light in weight as to be easily and quickly transportable from loom to loom throughout the weave shed.

REPAIR PARTS. As on any machine, certain parts in time show wear and must be replaced. Modern manufacturing methods set up standards and tolerances for the making of these parts so that any replacement is exactly interchangeable with the original piece. Barber-Colman Company maintains a skillfully-staffed department to make and stock those units which, experience shows, are in most demand. In addition, supplementary stocks

are maintained at the company's branch offices to provide best-possible delivery from strategically-located centers.

SERVICE. No machine made can function without Service. Experienced Service Men must be available to explain and demonstrate the working of the machine when it is delivered, and must be on call if any trouble develops to determine the cause of any failure, make necessary adjustments, and revitalize the productive functions of the machine. There are Barber-Colman men ready and willing at all times to answer promptly any call for assistance, and to make sure that Barber-Colman machines are on the job as near 100% of the time as possible.

These pictures, taken in the Barber-Colman plant, show a few of the skilled mechanics whose experience and aptitudes contribute vitally to the quality and performance of Barber-Colman machines.



AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A.

GREENVILLE, S. C., U. S. A.

MANCHESTER, ENGLAND

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y.

JUNE, 1948

Booklet designed to attract College Graduates to Rayon Industry



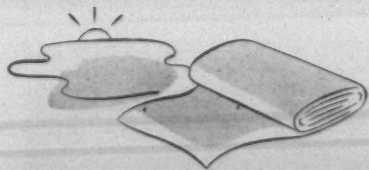
American Viscose believes that the continued success of any industry is directly dependent on the development of its future leaders. In a highly technical field such as rayon, that means persuading the best of the graduates of the country's leading engineering colleges to make rayon their career.

To further this policy Avisco is carrying out a College Recruitment Program. One of the tools used has been the book "Preview of American Viscose"—a new edition of which is just off the press.

Liberal illustrated, the book unfolds a panorama of the making of rayon. Many things a young man needs to know in order to visualize his place in the industry is touched upon. Its record of growth, its financial stability, its prospects are established. The different departments necessary to the functioning of a large producer, such as American Viscose, are described briefly with a mention of the skills required by each. The American Viscose Employee Benefit Program is explained.

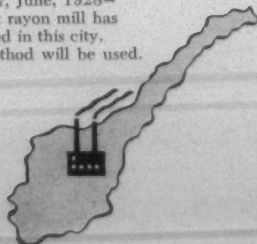
Because "Preview of American Viscose" gives such a complete picture of the making of rayon, its circulation is not being restricted to prospective graduates. Anyone interested in the rayon industry will find it stimulating reading. Copies are available on request.

RAYON 20 YEARS AGO



MARCUS HOOK, June, 1928—The Viscose Company has developed a new, subdued luster rayon yarn called "Dulesco."

RYGGE, NORWAY, June, 1928—Norway's first rayon mill has been established in this city. The Viscose method will be used.



MAKE USE OF *Avisco*[®] 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

- 1 FIBER RESEARCH
- 2 FABRIC DESIGN
- 3 FABRIC PRODUCTION
- 4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

Many cotton mills have found it profitable to consult Corn Products textile laboratory at Greenville,

South Carolina. The services of our technicians are offered textile manufacturers without obligation.

CORN PRODUCTS SALES COMPANY

Greenville, S. C.

Atlanta, Ga.

Greensboro, N. C.



DO YOU KNOW? By Using BEMIS TITE-FIT TUBING

YOU

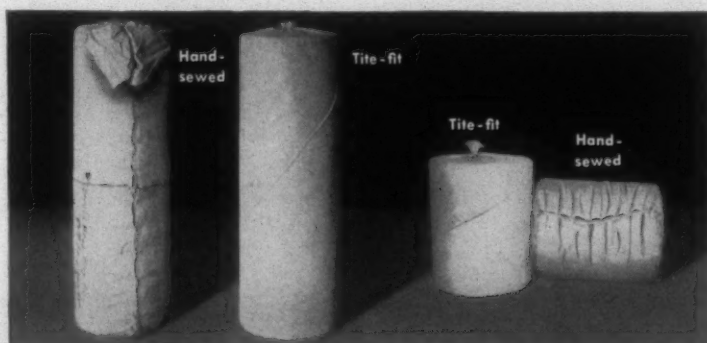
REDUCE labor and material costs, because you:
ELIMINATE handling heavy bales of burlap.
ELIMINATE time required to open bales and remove bale coverings.
ELIMINATE time required to cut burlap into sheets.
ELIMINATE using more burlap than necessary.
ELIMINATE all hand sewing.
IMPROVE the appearance of your rolls.

YOUR CUSTOMERS

RECEIVE neat packages that are easy to handle, because there's a handy ear on each end.

SAVE TIME as TITE-FIT TUBING is easily and quickly removed. Just untwist wire tie at one end and slip tubing off.

ELIMINATE chance of cutting into contents and damaging goods, as no cutting of sewing thread or goods is necessary.



This versatile tubing fits almost any shape and a wide range of package sizes. One roll may cover many different diameters and lengths neatly, without waste because TITE-FIT TUBING has stretch in both directions.

5 QUICK STEPS

That's all . . . when you package with Tite-Fit Tubing



1. Pull tube well down over object, leaving an overage to cover bottom.



2. Turn package on side and fasten tube at bottom with a wire tie.



3. Turn package upright and use both hands to take up slack.



4. Fasten top with a wire tie close to object to assure tight fit.



5. Cut off the Tite-Fit Tubing about 3 inches above the wire tie.

MAIL COUPON NOW

Bemis Bro. Bag Co.
 5114 Second Ave., Brooklyn, N. Y.

☐ Send descriptive folder on TITE-FIT TUBING
☐ Send sample. Our packages are approximately _____ inches in circumference. (Please specify)

Name _____
 Firm _____
 Street _____
 City _____ Zone _____ State _____

BEMIS BRO. BAG CO.

Brooklyn 32, New York



Canadian Bag Co., Montreal, and the Ontario Bag Co., Port Colborne, Ontario, are licensed manufacturers of TITE-FIT TUBING in Canada.

How to get 6 GALLONS of in a 5-Gallon Container

(WITHOUT USING A SHOE HORN)



SPREADING CAPACITY

Barreled Sunlight's

**Amazing Spreading Capacity
Gives You up to 20% Bonus with every
Stroke of the Brush**

Easy does it — because it's not the space in the can a paint occupies that's important, it's the area on the wall the paint *covers*! Barreled Sunlight both hides better and at the same time actually covers up to 20% more area, giving you the equivalent of 6 gallons of paint in every 5-gallon can.

And Barreled Sunlight white is W-H-I-T-E. Whiter when you put it on and whiter throughout its longer paint life. The Rice Process, a "top drawer" trade secret, is the reason why. This results in a cleaner job that lasts longer, and in ceilings and walls that get the most out of both natural and artificial light and cut your lighting costs.

What's more, Barreled Sunlight is free-flowing, brushes on with a minimum of effort. So any way you figure it — in paint savings, labor savings, time savings or light savings — Barreled Sunlight is a cost-reducing paint. Ask a Barreled Sunlight representative to come in and *prove* it to you. Write today, U. S. Gutta Percha Paint Co., 5-F Dudley St., Providence, R. I.

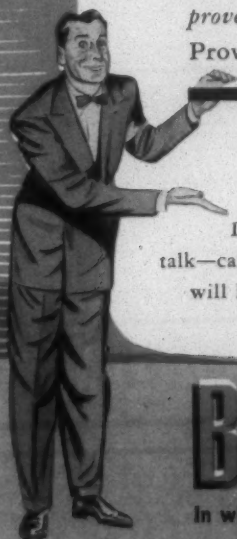
**Let a Barreled Sunlight Representative
be your paint advisor**

If you want MORE than a paint sales talk—call in the Barreled Sunlight man. He will help you prepare an over-all paint-

ing plan from boiler room to board room...will make helpful suggestions for the use of white and color for all applications.

BARRELED SUNLIGHT *Paints*

In whitest white or clean, clear, pleasing colors, there's a BARRELED SUNLIGHT Paint for every job



throw away that crystal ball

Despite the uncertainties of the next few years, one fact is admitted in the textile industry. Profits must come from savings; further markups are dangerous. And no textile man needs a crystal ball to see how to effect these savings. In winders particularly, the means are evident. *Greater production of a better product at less cost* can be more or less achieved by any modern winder. But that alone is not enough. Winding equipment must also be **FLEXIBLE**,—adaptable to changing fibre and yarn requirements, for change is the order of the day. The Foster Model 102 is the **ONLY** winder of its type which offers maximum flexibility in addition to the other modern requirements.



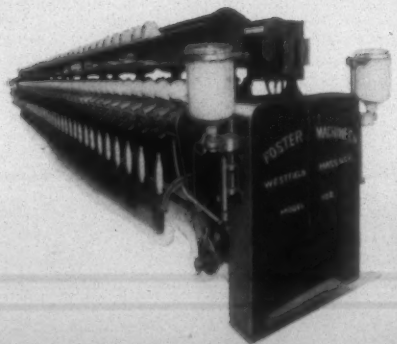
HERE'S THE STORY:—

FLEXIBILITY — Will handle any count or type staple yarn with same traverse mechanism—any angle of wind from 9° to 18°—any ordinary taper. Can be equipped to wind knitting cones, warper cones, dye packages, tubes or short traverse cheeses, one type on each side of the machine if desired.

INCREASED PRODUCTION — Doubles production over obsolete models because of high winding speeds (up to 700 y.p.m.) and labor saving devices mentioned under "ECONOMY". 7" traverse packages instead of standard 6", if desired.

ECONOMY — Reduces operating costs $\frac{1}{3}$ under obsolete models because of self threading tension devices, easy doffing, 7" traverse package, if desired, and empty bobbin conveyors which empty into standard sized trucks. Repair costs as low as \$3.50 per year per 100 spindle machine.

QUALITY PRODUCT — Automatic inspection. Conditioned yarn. Convex base prevents underwinding and nipping. Ribbon breaker prevents ribbon wind. Uniform density and properly shaped cones. Minimum tension on soft twist yarns prevents excessive breakage.



Send for
Bulletin A-95
for
complete data.

FOSTER MACHINE CO.


Westfield, Mass., U.S.A.

Southern Office: Johnston Bldg., Charlotte, North Carolina; Canadian Representative: Ross-Whitehead & Co., Ltd., University Tower Bldg., 660 Ste. Catherine Street, West, Montreal, Quebec; European Representative: Muschamp Taylor Ltd., Manchester, England.

FOSTER MODEL 102

The Flexible Winder

FOR COTTON, MERCERIZED, WOOL, WORSTED, MERINO, SPUN SILK OR SPUN RAYON YARNS



ECONOMIZE with Armstrong's Cork Cots

YOU SAVE three important ways when you install Armstrong's Cork Cots on your spinning and roving frames. First, these widely used roll coverings are low in initial cost. Second, they go on fast, reduce assembly time as much as 50%. Third, they have a long service life.

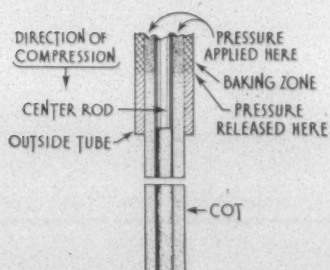
The extra "grip" of Armstrong's Cork Cots gives you more uniform yarn. Their extra friction also carries waste well back onto the clearer boards—so no eyebrowing occurs. Thus there's no danger of waste's being nipped into the yarn.

The extra resilience of Armstrong's Cork Cots provides quick recovery from most laps and hard ends. And because these cots are extruded, they have no hard or soft spots to grip the yarn unevenly. They retain these spinning advantages throughout a long initial service life. In addition, they can be rebuffed for three or four additional full length service lives.

Get all the facts on these economical cork cots from your Armstrong representative. Or write today to Armstrong Cork Company, Textile Products Department, 8206 Arch Street, Lancaster, Pennsylvania.



EXTRUSION PROCESS PRODUCES SEAMLESS CORK COTS



Armstrong's Cork Cots have no structural weakness to cause premature breakdown. Each cot is uniform in density from inside to outside, from end to end. Each compresses evenly, spins stronger yarn.

ARMSTRONG'S CORK COTS

ACCOTEX COTS • ACCOTEX APRONS

H & B HIGH-DRAFT



These High-Draft Slubbers at Saxon Mills, Spartanburg, South Carolina, are like many other H & B installations and reflect the industry's widespread acceptance of modern high-draft slubbing.

Here are eighteen 8 x 4 and eighteen 9 x 4½ H & B slubbers, with 132 spindles per frame. Each machine has a 5-roll drafting unit and an individual motor drive,

and all are suitable for a wide range of hank sizes.

Excellent design, materials and workmanship combine in H & B High-Draft Slubbers to produce high quality, low cost roving. Low cost, because high-draft eliminates from 1 to 3 operations. High quality, because of the features listed on the adjacent page.

H & B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

SLUBBER INSTALLATION



at Saxon Mills

Here's why many mills prefer H & B High-Draft Slubbers:

1. Extruded aluminum roller beams, bobbin rails, snug rails, snugs and octagon rolls.
2. Four-roll or five-roll drafting system.
3. Chain drive to the bobbin shaft.
4. Clean rolls due to efficient bottom and top clearers.
5. Dependable builder motion.
6. Positive roll weighting by means of streamlined saddle and weighting assembly.
7. Easy distribution of drafts—intermediate draft adjustments can be made without changing the overall draft.
8. New type differential motion with straight cut spur gears throughout.

MACHINE CO.

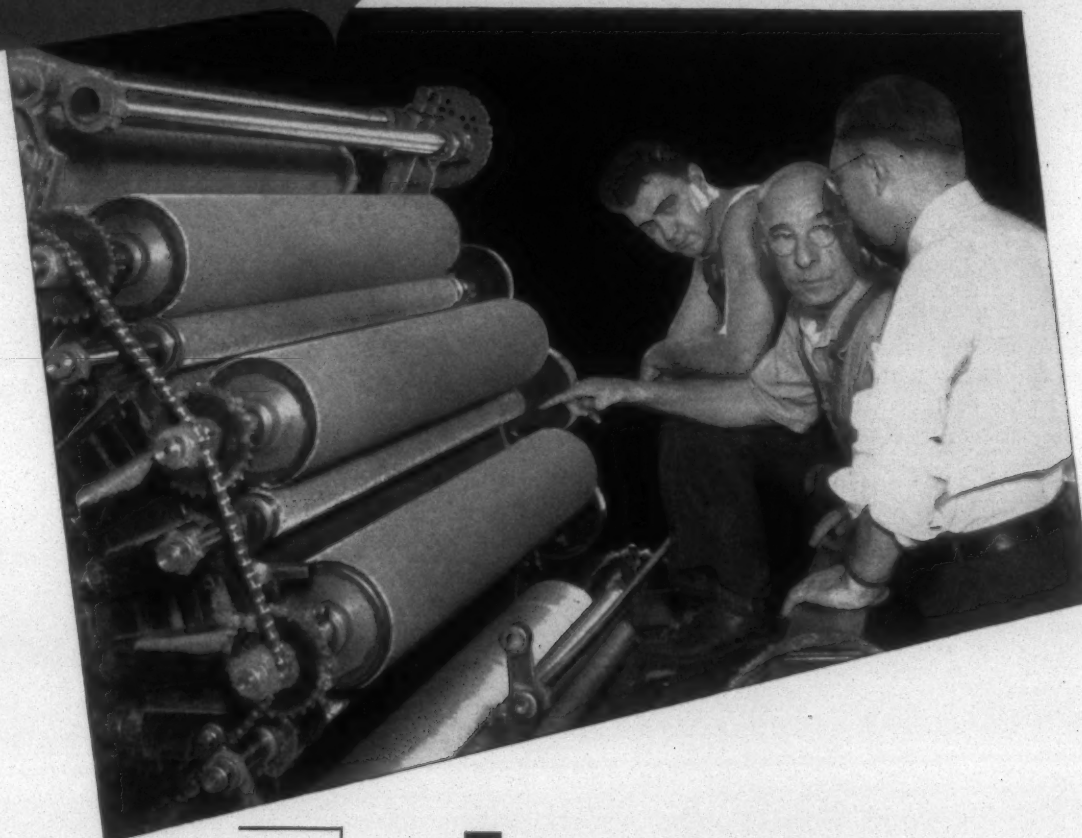
Textile Machinery

DIVISION

PAWTUCKET, RHODE ISLAND, U. S. A.

BRANCH OFFICES
ATLANTA, GA.
815 CITIZENS AND SOUTHERN
NATIONAL BANK BUILDING
CHARLOTTE, N. C.
1201 JOHNSTON BUILDING

Expert Supervision Knows When Card Clothing Needs to Be Replaced



The Tufferizing Process—developed, owned and used exclusively by Howard Bros. — cuts and forms wires with an accuracy never before obtained in the making of card clothing. The wires are formed with precision and placed accurately in the famous Tuffer Foundation . . . when drawn on the cylinder they fit snugly — sides perfectly parallel and every point in place.

The top notch superintendent knows that the cards taking the brunt of the work need to be inspected more often than the others . . . and that if maximum efficiency is to prevail, *all* cards must have uniformly high quality clothing.

Precision-made Tuffer Card Clothing meets the requirements of those who *know* the best . . . and *want* the best! It increases production, improves the quality . . . and reduces carding costs.

For complete information ask our representative or write to any Howard Bros. plant or office.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga., and Gastonia, N. C.

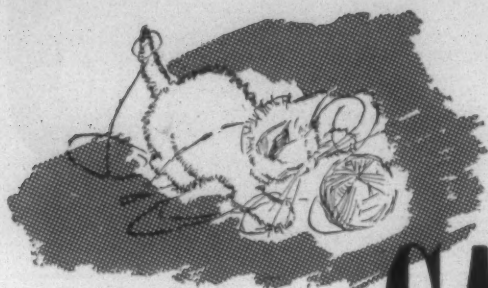
Branches: Philadelphia, Pa., and Blanco, Texas

Direct Representation In Canada

A-2



IMPROVES PRODUCTION ALL ALONG THE LINE



FOR RICH,
SMOOTH SOFTNESS

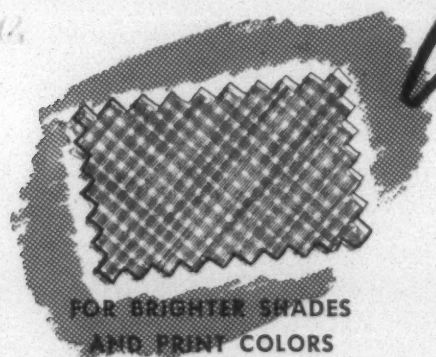


FOR PERMANENT
UNIFORM FINISH

CATYLON

A HARTEX PRODUCT

*Cation-active
Softener*



FOR BRIGHTER SHADES
AND PRINT COLORS



ECONOMICAL

CATYLON is economical—only an exceedingly small quantity of this very efficient softening agent need be used.

CATYLON is permanent—repeated laundering or dry cleaning will not affect the original handle of the fabric or the rich, smooth softness of the finish.

CATYLON makes fabrics more "salable"—assures bright shades, clear print colors and uniform finish.

CATYLON is available in a complete range of Cation-Active chemical formulae to meet all your special fabric requirements. Let our demonstrator prove, in *your* plant, the benefits resulting from the use of **CATYLON**. Your inquiry entails no obligation.

HART PRODUCTS CORPORATION • 1440 Broadway, N.Y. 18, N.Y.

HARTEX PRODUCTS

Rayon Oils & Sizes	Splashproof Compounds
Nylon Oils & Sizes	Delustrants
Kier Bleaching Oils	Leveling Agents
Finishing Oils	Cationic Softeners
Synthetic Detergents	Cotton Warp Dressings
Conditioning Agents	Wetting-Out Agents
Scrooping Agents	Weighting Agents
	Mercerizing Penetrants

Send for free booklet, "Mercerizing and ALKAMERCE—The Ideal Dry Mercerizing Penetrant"



Hart Products



based on research

*your
LeBlond*

distributor. . • strategically located near you . . .

knows metal turning as few men know it. Since he offers the largest complete line of lathes available from one manufacturer, his unbiased advice on the selection of the proper type and size for any specific use can be relied upon. Call him today without obligation.

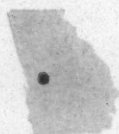


LEBLOND DISTRIBUTORS CAN

SOLVE YOUR METAL TURNING PROBLEM

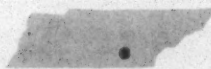
ATLANTA

THE HENRY WALKER CO.
245 SPRING ST., S. W., P. O. BOX 5105
PHONE CYPRESS 5411



CHATTANOOGA

BERT L. SYLAR & SON
105 BELVOIR AVE., PHONE 25515



BIRMINGHAM

MOORE-HANDLEY HARDWARE CO., Inc.
27 S. 20TH ST., PHONE 7-4121



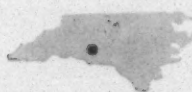
MEMPHIS

BERT L. SYLAR & SON
520 FALLS BLDG.
PHONE 8-3712



CHARLOTTE

THE HENRY WALKER CO.
1310 S. TRYON ST., PHONE 4-5391



NORFOLK

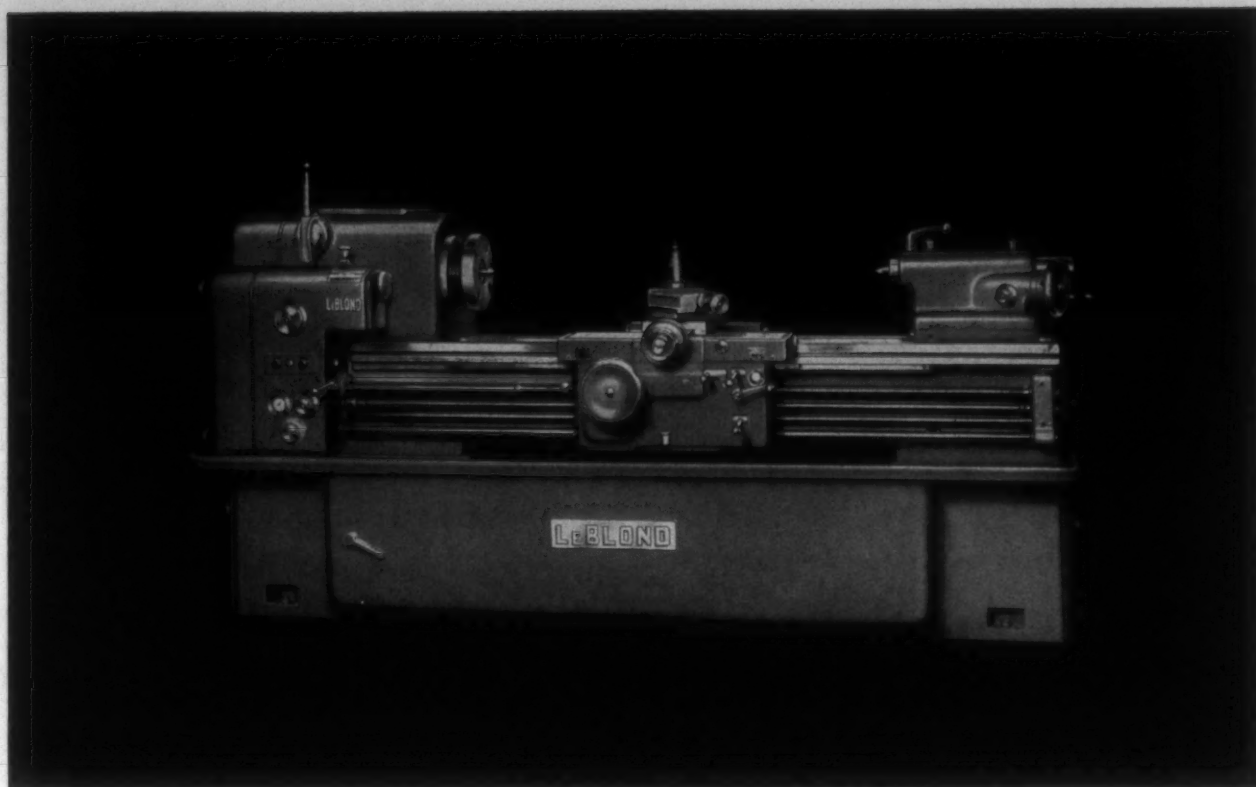
THE HENRY WALKER CO.
P. O. BOX 1041, PHONE 51641



JACKSONVILLE

FARQUHAR MACHINERY CO.
720 W. BAY ST., PHONE 4-6781





WITH THE NEW LeBLOND 16" MODEL RT HEAVY DUTY LATHE

With competition keen, you need the best possible performance from your lathes. The LeBlond 16" Model RT Heavy Duty gives you that extra margin of speed, power, accuracy, and versatility it takes to produce better turning—

faster, cheaper. Easier to run. Easier to maintain. Performs profitably on a wide variety of work: production, tool room maintenance, experimental. Be sure to ask for complete information on this remarkable new LeBlond Lathe.

buy the Model RT...get these important advantages:

- Single lever controls 16 spindle speeds ranging from 20 to 1025 rpm, or 30 to 1537 rpm.
- Universal power rapid traverse moves carriage, cross slide, and tailstock.
- Combination gear-belt drive headstock.
- All main drive gears hardened and ground.
- One-piece apron with positive jaw feed clutch and automatic lubrication.
- Feed box totally enclosed, automatically lubricated.
- Thrust-lock tailstock with worm and rack construction; full length bearing for spindle; direct reading spindle travel dial.
- Hardened and ground steel bed ways.

For complete and detailed information on this or any other lathe in the complete LeBlond line, call or write your LeBlond distributor. The R. K. LeBlond Machine Tool Co., Cincinnati 8, Ohio.



the bulletin board

Questions, answers, comments and other material submitted by the readers for use in this column should be addressed to Editors, TEXTILE BULLETIN, P. O. Box 1225, Charlotte 1, N. C. All material will be edited properly before publication.

THEY WANT SOME, TOO

Sirs:

If available, we shall appreciate it if you will kindly send us tear sheets of the articles, "Synthetic Resins And Their Application," by Francis Tripp, published in the Nov. 15 and Dec. 15, 1947, issues of TEXTILE BULLETIN.

N. H. Schultz
Perkins Glue Co.
Lansdale, Pa.

Sirs:

We would appreciate it very much if you could forward to us one copy of the recent articles entitled "Synthetic Resins And Their Application," which appeared in TEXTILE BULLETIN, Vol. 73, Nos. 6 and 8.

Marian S. Pomeroy
Department of Civil
and Sanitary Engineering
Massachusetts Institute
of Technology
Cambridge 39, Mass.

Sirs:

Would it be possible to send us a copy of your January, 1948, issue or a reprint of the article entitled "Metallic Or Flexible Wire Card Clothing," by R. Z. Walker? Thanking you in advance for your kind attention in this matter, we are

E. A. Snape, Jr.
Benjamin Booth Co.
Allegheny Avenue
and Janney Street
Philadelphia 34, Pa.

Sirs:

Congratulations on the fine letter, "Dear Son," appearing in the April, 1948, issue. I would appreciate a reprint of the letter appearing in the July 15, 1947, issue if it is available.

W. Henry Eubanks
Saratoga Victory Mills, Inc.
Albertville, Ala.

¶ Apparently at least some of our published material is getting a good reception. Reprints/tear sheets/copies have gone forward.—Eds.

THEY LIKE IT

Sirs:

In the April issue of TEXTILE BULLETIN I have read with a great deal of interest and satisfaction your very able and analytical

editorial entitled "The Three Races." The propaganda now going on, apparently all over the country, trying to establish social equality is perfectly absurd and ridiculous. Of course it is based on politics of a very low degree; that is for one party or the other to garner the colored vote in New York, Chicago, Philadelphia and other Northern cities.

Philip C. Wentworth
Treasurer
National Ring Traveler Co.
354 Pine Street
Pawtucket, R. I.

Sirs:

I was just looking over your May edition of the TEXTILE BULLETIN; it is not only exceptionally large, but a fine piece of work.

W. A. Graham Clark
Textile Expert
U. S. Tariff Commission
Washington, D. C.

MADE YOUR RESERVATIONS?

Sirs:

In the last issue of TEXTILE BULLETIN, under the heading "Textile Industry Schedule," the Third National Plastics Exposition in Grand Central Palace, New York City, is listed as running from Sept. 27 to Oct. 2. This is incorrect. Would you be kind enough to change the dates from Sept. 27 to Oct. 1?

Worth Colwell
In Charge of Publicity
National Plastics Exposition
Korbel & Colwell, Inc.
Public Relations Consultants
480 Lexington Avenue
New York 17, N. Y.

¶ Requested change has been made. While on the subject, the editors would like to request that the appropriate officials of all textile and allied groups notify us of coming meetings, conventions, outings, etc., as far in advance as possible. With so many places to go, our readers like to plan their travels well ahead.—Eds.

FROM OVERSEAS

Sirs:

The name and address of your publication has been given to me by the American Consul in this city. I am a textile manufacturer and should like to have a sample copy of

your review with the purpose of subscribing to it. Will you be so gentle as to furnish me with the sample copy I desire? As it is not possible to me, for the moment, to get dollars for the payment of the subscription, this payment will be made to you through a connection I have in Puerto Rico. Should you, however, have an expedient to draw on me in pesetas or to otherwise compensate for the amount which I would owe you, please suggest to me what I could do on this particular.

Rafael Catala
Guillen De Castro, 77
Valencia, Spain

¶ Senor Catala will get his TEXTILE BULLETIN some how or other. We hope we won't have as much trouble getting paid for same as he has with his prepositions.—Eds.

Sirs:

This Consulate General has been requested by a local government office to furnish it with certain information regarding the cost of cotton yarn in the United States. It wishes to know if the factory price of cotton yarn, for example 8s, on spools is more or less than the price in hanks, or the same. If there is a price differential it wishes to know the approximate difference between the two costs. Any general information that you could furnish the Consulate General by return air mail in this connection would be greatly appreciated.

L. S. Armstrong
American Consul
American Consulate General
The Foreign Service of the
United States of America
Tunis, Tunisia

¶ To our best knowledge, there is no mill in the United States which puts up sale yarn on spools at the present time. We presume that the term "spool" is used in a general manner, indicating regular commercial packages such as cones and tubes. There is a price differential between regular packages, such as cones and tubes, and yarn put up in skein form. We presume that your reference to hanks means skeins. This differential is currently from one to two cents a pound, due to the considerable amount of additional labor required to put yarn up in skein form. Skeining requires special machinery known as reelers and after the yarn has been reeled it must be taken off these machines by hand and tied with tie bands by hand. A great deal of care must be exercised to see that the yarn does not become tangled.—Eds.

DIRECTORY DOINGS

Sirs:

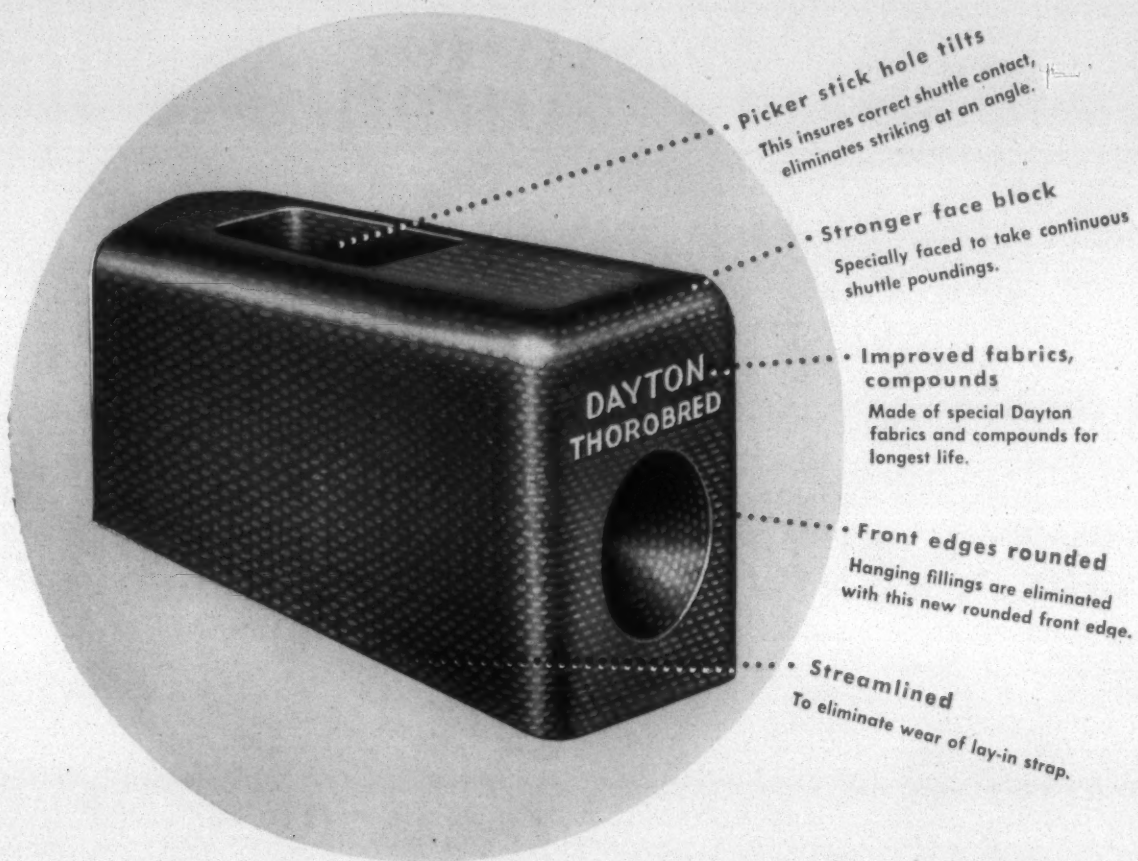
Please send us two copies of your latest office edition of *Clark's Directory of Southern Textile Mills*.

(Miss) Marion S. Nance
Assistant Secretary
Asheville Fabrics Mill, Inc.
Asheville, N. C.

¶ We regret to say that our supply of the 1947 office edition is completely exhausted, and the 1948 volume will not be ready for distribution before some time next month. The 1948 pocket edition of *Clark's Directory* is now being distributed; price, as formerly, is \$2 per copy.—Eds.

Reduce maintenance costs . . . get better service from this

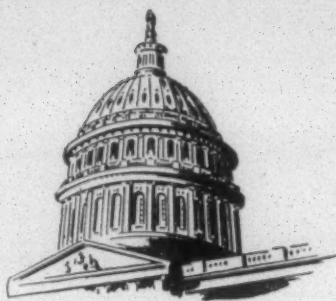
NEW improved PICKER



On today's fastest looms, Dayton Thorobred Loop Pickers perform with highest efficiency at less cost. Made of special fabrics and synthetic rubber compounded with unusual resilience, Dayton Pickers are molded in one-piece, super-strong units that give increased service, longer life. Designed with a flared bottom, Dayton Pickers are built for easy application. There is nothing to break, nothing

to expand. Their design includes a specially patented symmetrical loop construction which anchors the picker onto the stick and holds it in the correct contact position indefinitely. If you aren't using Dayton Pickers, it will pay you to get the complete story. Write Dayton Rubber, Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Bldg., Greenville, South Carolina.*

Dayton Rubber



WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Overhauling the Taft-Hartley Law in the next Congress becomes more and more likely. Proposals for changes in procedural and administrative provisions are shaping up; federal courts may be given jurisdiction over unfair labor practices, and possibly other labor complaints. N. L. R. B. wings will be sharply clipped; it may be abolished, and its functions given to the Department of Labor.

Proposals taking shape now indicate the next Congress will be faced with dealing with compulsory unionism, industry-wide strikes and bargaining, unnecessary strikes over things N. L. R. B. could settle, welfare funds, and Communist domination of unions. Other proposals in the offing would tighten requirements to bargain in good faith, and deal more sharply with conspiracy and collusion.

The Ball Committee will offer a new and comprehensive definition of commerce in the next Congress, intended to crystalize the relation of unions to commerce. Congress has no constitutional power to pass laws solely to regulate labor relations; both the Wagner and Taft acts were enacted on the theory that in stabilizing labor relations, the flow of goods in interstate commerce would be increased.

Evidence before the committee shows that in post-war upheavals through strikes and slow-downs, the flow of commerce has been impeded and checked. There's been rapid spread in union restrictions on one-man production, imposition of seniority over merit, resistance to apprenticeships and labor-saving devices, spread in feather-bedding, and in fostering discontent and unrest among workers.

Seven C. I. O. unions turned up before the committee to tell what's wrong with the law. They put it simply: Repeal it. No amendments or changes, they said, would make it fair or workable. They refused to discuss their experience in employer relations under the law, but said it's been a trouble maker, putting weapons in employers' hands to break strikes and break up unions, and promote "government by injunction."

N. L. R. B. is charged with having done a lot to load down its docket and clog its machinery by suddenly pulling out hundreds of complaints, lying dormant for a year or more in regional offices.

N. L. R. B. Chairman Herzog has come in for the most scathing criticism. He's charged in legislative circles with spearheading a drive to blunt provisions of the new law. White House opposition



Ready to Go!

Ready for shipment from stock are these and other hard-to-obtain textile parts, such as clutch gears, worm gears, comb box forks, lickerin shields, bobbin and spindle plate and coupling gears, mote knife brackets, grinding roll brackets, and stripping brush brackets.

We can promise *quick delivery* on such items. Send us your order *today*. All orders will be handled the date they are received. Don't be late with yours.

Southern States
HOME OFFICE AND FACTORY



Equipment Corp.
HAMPTON, GEORGIA

HENDERSON FOUNDRY & MACHINE COMPANY DIVISION

Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

to the law has become outspoken since the Ball Committee's hearings started.

Sole hope of John Lewis to save his union from another crack-up and debacle like 1932, say mine owners, is to force them to accept his pension plans. The industry is losing its best customers as railroads turn to diesel engines, householders to oil or natural gas, and steel makers to electric blast furnaces.

The mine owners feel that differences with Lewis will not be settled without another major convulsion in the coal fields. They refuse to assume a \$20,000,000 distress benefit commitment for miners over the next ten months, growing out of a 1946 pact with Secretary Krug, under federal seizure. They say lack of money in Lewis' 1946 fund has no relation to writing a new contract. Lewis says the fund comes ahead of a contract.

Coal prices have climbed so high through Lewis' continual wage exactions, it's claimed; that tens of thousands of miners will become permanently idle if consumption continues to decline. Lewis' strategy is to pension off surplus miners at mine owners' expense, and thus try to preserve his wage and hour structure, and forestall another crackup of his union.

Union leaders are cold to the cost of living and "annual improvement" formula inserted in the new General Motors wage pact. The annual increase is three cents, which the unions say, is far less than enough. Some of them want ten cents a year increase, with additional welfare funds.

The minimum wage will not be changed at this session of Congress. Other proposals that are dead are the civil rights program, and a sweeping increase in Social Security benefits.

Personal feuds are running strong in the top brackets of the Administration; at least half the cabinet seems to be debating resignation. It is cabinet members arrayed against the little clique of White House yes-men, some of whom make sweeping decisions in Truman's name without him ever knowing about it.

The President, listening chiefly to his yes-men, does one flip-flop after another, including recognizing a Jewish independent state without any warning to the State Department. He acts forthrightly only when hard hit, as when Marshall told him if he carried out his pledge of arms to Palestine all Arab nations would quit U. N., and cancel their oil and other concessions to Uncle Sam.

C. I. O. leaders will reopen the campaign in Congress next time to expand Social Security old age benefits and raise the payroll taxes. The argument is that inflation has reduced present benefits to the vanishing point.

Most sweeping changes in federal taxation in this century are expected in a new revision measure which the Ways and Means Committee will bring into the House early next year. Corporate taxes will be sharply revised. Provision will be made for appealing decisions of the federal tax court.

How do we know how thoroughly CERFAK cleans ?

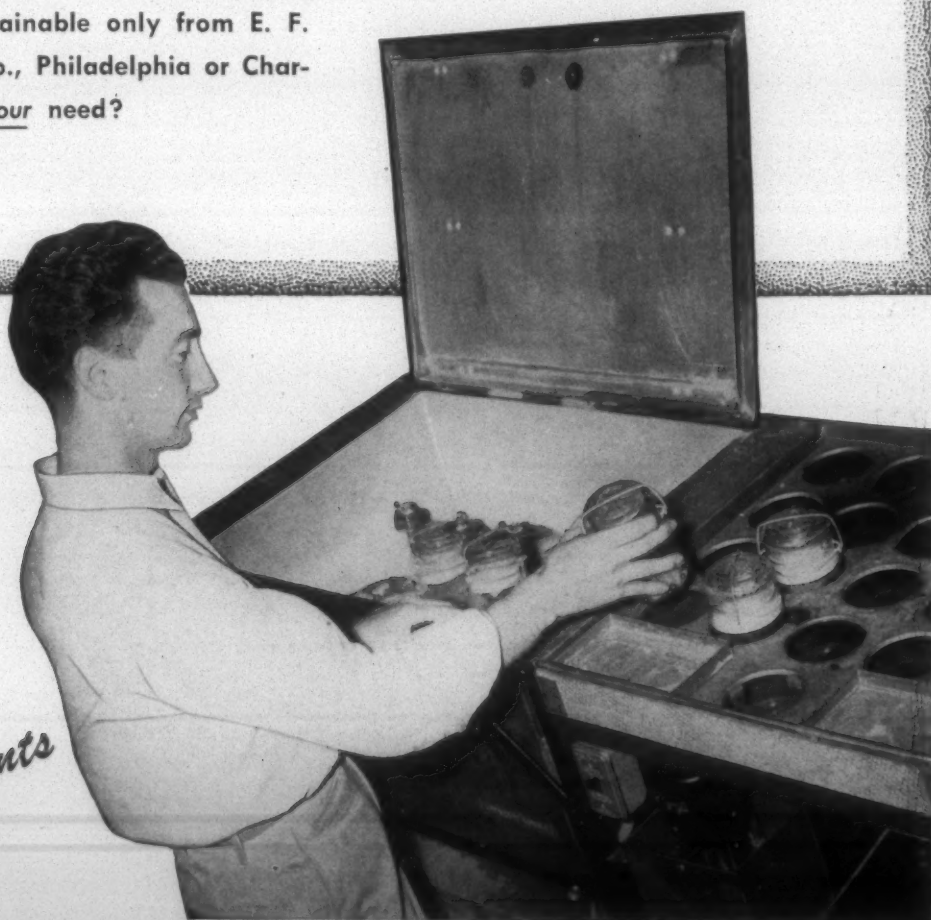
Nothing's left to guesswork in evaluating Houghton's CERFAK. This series of synthetic detergents, born some ten years ago in our laboratories, has been rigidly tested there and in the field, to determine definitely how efficient each type is, and for what jobs it should be used.

The Launderometer, shown below, washes a number of artificially soiled fabric samples simultaneously. Each jar contains a different detergent solution, and each washed sample is checked by Reflectometer for comparative cleanliness.

But that's only the beginning. The real test is in the mill. No type of CERFAK is recommended for a particular wet processing job until it has undergone actual production test and has been found O. K. for the application. Trained textile technicians conduct these trial runs under actual plant conditions.

Results prove that there is a type of CERFAK best suited to every cleaning need, offering an excellent money value, and obtainable only from E. F. Houghton & Co., Philadelphia or Charlotte. What's your need?

*Houghton's
Cerfak
Detergents*



textile bulletin

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Advice To Graduates

During this month many young men, who have graduated from high schools or from either technical or liberal arts colleges, will be entering the employment of textile plants and a word of advice and guidance may have a lasting effect upon their careers.

Dean Malcolm E. Campbell of the School of Textiles at North Carolina State College, Raleigh, employed the *N. C. State Textile News*, the mimeograph publication which is used by the faculty for communication with students, to send a final message and a word of advice to those who were graduating.

His message was filled with such wise and sound advice that we think it may be helpful to graduates of other textile schools, liberal arts colleges and high schools which may be now entering the textile industry.

Dean Campbell said in his message:

"As this college year comes to a close, I feel a strong urge to offer a little advice to those of you who are completing your education with us. I wish it were possible for me to spend an hour or so with each of you, as I believe I could give you some suggestions based on experience that would prove helpful to you as you follow your various careers. There are many points that I would attempt to cover. But this is not possible, and so I have picked out two or three that I will touch upon in this, the last issue of the *News* for the college year 1947-48. No two men are alike, and I am under no illusion that what I have to say is original or revolutionary in any respect. I do know, though, that some kinds of advice are good for all of us, and I hope that you will consider what I have to say carefully.

"First, and this may seem rather elementary, I want to stress the importance of getting along with your fellow

workers—those who may be responsible to you, those on your own level of employment, and those above you. Assuming that you have been an average college student and that you have a normal amount of energy and determination, your strongest asset will be your ability to get along with others. If you have developed the knack of making people feel friendly toward you and at the same time respect your judgment, your superiors will single you out for greater responsibility as opportunities arise.

"Books, including many 'best sellers,' have been written about this subject, but I doubt whether anyone ever attained success with a book in his hand on how to make friends, etc. Remember this: no one occupies such a lowly position anywhere that he can't teach you something. Your college education makes you no better as a man than the fellow who hasn't had the opportunity you have had. Learn what you can from every source, and be grateful for it. And remember this, too: sooner or later you are going to be thrown with someone you think you don't like, try as you may; you may even be working for him. This is 'standard equipment' in everyone's life at one time or another. It takes a little more, well, character, I guess, to put up with someone who irritates you, or who you think is giving you a raw deal.

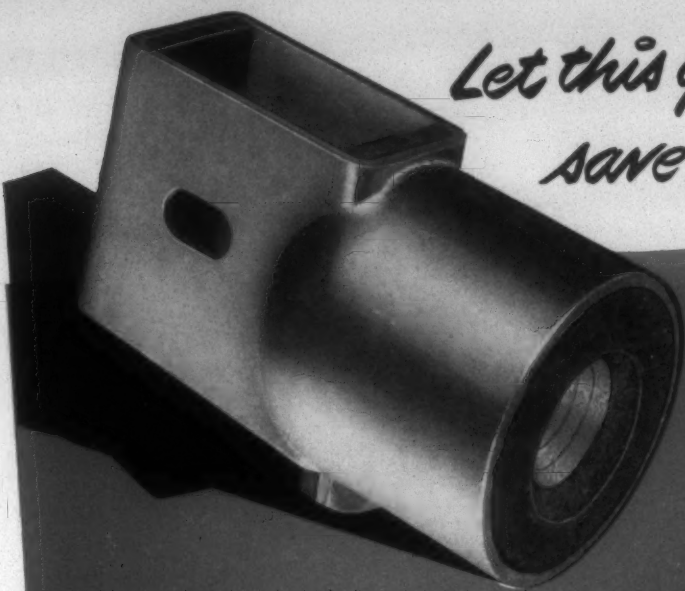
"A friendly, courteous attitude toward your fellow employees will help you go far in the textile industry. And above all, remember that a reputation for fair play, which you can earn only by being fair with everyone with whom you come in contact, is perhaps one of the most salient resources you can have.

"My second point has to do with the fact that you have developed the habit of studying while you have been in college. In this you have a very valuable asset, if you will keep up the habit. Plan to continue to study a little each evening. If you don't do this, you will be shocked to find out how difficult it is to pick it up again. It is inevitable that, as the responsibilities of your position increase, you are going to have to do a considerable amount of reading and studying on your own time.

"In this connection, it is a splendid idea to begin as soon as possible to accumulate a library of your own. Keep an eye out for new books in your own and related fields, buy them, and make it a point to do some steady and serious reading. You will find that your education only started in college. I once learned that a friend of mine, an old-timer in the cotton business, was a graduate of Harvard. When I asked him about it he said 'Yes, it's true. But everything I know I've learned since I got out of Harvard!'

"Lastly, I would urge every textile graduate to develop the ability to speak in public. Sooner or later every one of you is going to have to speak to groups of people, including both small groups around the conference table, and larger groups, as in company gatherings, civic meetings, and the like. There is nothing that will mean more to your future success than the ability to stand on your feet and think clearly and express yourself effectively. This comes hard to most people, and you can develop your skill and proficiency in public speaking only by serious thought, determination and hard work. Whenever you are asked to speak in public, accept the assignment gladly, and then put everything you have into it. You don't have to be an orator to be a good public speaker. Check on any textile executive you can think of, and you will probably find that he is a confident public speaker, and that he speaks in his own characteristic, natural, unaffected way. You should have acquired some of the

*Let this great new picker
save you money 4 ways!*



STEEL-HIDE

By Graton & Knight
Combines Long Life With
Amazingly Smooth
Performance

HERE'S WHAT STEEL-HIDE CAN DO FOR YOU:

- **CUT OPERATING COSTS** . . . STEEL-HIDE combines longer life with smoother operation. Shock absorption tremendously improved. Laminated raw-hide leather nose is accurately drilled to receive shuttle spur. Boxing problems are greatly reduced. STEEL-HIDE is interchangeable right and left hand, cutting inventory to a minimum.
- **REDUCE "SECONDS"** . . . rebound controlled . . . no kinky filling . . . because picker maintains true alignment on stick due to patented loop construction: leather cushion on front absorbs shocks—rubber cushion on back insures snug fit—steel lip prevents rocking.
- **INCREASE YARDAGE** . . . because exclusive, steel-and-leather construction gives longer loom

service . . . fewer shutdowns. Heavy gauge steel sheath gives extra strength . . . leather gives perfect resiliency.

- **REDUCE MAINTENANCE** . . . because all parts associated with picker action last longer. Gives longer shuttle life. Stick breakage is reduced . . . shoe wear is minimized.

Order a test lot from your Graton & Knight distributor . . . Watch STEEL-HIDE outperform any other picker you've ever used! Designed to fit all Draper X Series looms using broad-faced pickers with 1" x 19/32" sticks.

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328 Franklin Street, Worcester 4, Mass.

STEEL-HIDE . . . its longer life is locked in steel



Loom tests show that STEEL-HIDE cuts operating costs, reduces cloth spoilage, increases yardage and reduces maintenance.

LATEST ADDITION TO THE



ORANGE LINE LOOM LEATHERS

A complete line manufactured by the
world's largest manufacturer of
Industrial leathers

EDITORIALS

knack of public speaking here in college. Increase your proficiency in this, and it will pay you well.

"Those are some of the things I'd talk to you about if we could have a little private talk before you take up your respective jobs. I hope you'll think them over seriously for a long time to come. If you will, I am sincere in saying that these thoughts will benefit you."

Laws Can Not Change Human Nature

Many have the erroneous impression that all discrimination against Negroes is in Southern states.

A recent survey made by Michigan men in a small Michigan town, with one member of the research organization posing as a Negro, showed the following:

The four hotels in the Michigan town, the tourist camp and 29 out of the 30 rooming houses will not rent to Negroes. None of the five dance places will admit them. The beauty parlors will not take them under any circumstances, and only one barber shop will serve them, and that only after hours. Out of 20 restaurants, only seven will serve Negroes, and although the five drugstores will fill their prescriptions, only one gives fountain service, although one other will give such service if no white people are around. Of the 12 taverns, 11 refuse to serve them, three out of four poolrooms will not let them play, and the bowling alley will do so only in off hours. The swimming pool, although municipally owned, will not admit Negroes at any time. The department stores and five-and-ten stores will sell to them, and the dress shops sell, but will not permit trying on.

The hospital in this Michigan town accepts colored patients, if it has to, but segregates strictly. Most of the nurses are prejudiced, and one absolutely refuses to treat Negro patients, declining to show up for duty when colored patients are in. The hospital does not hire colored personnel, and the majority of the nurses indicated they would quit if a colored nurse was hired. Of the ten doctors in the town, one would not take colored patients. All eight dentists professed to serve Negro patients, but two of them only after hours and a Negro check-up revealed that one would not serve at all.

Employment opportunities are meager, and only in the most menial service and unskilled labor class. Even such jobs as waiters and waitresses are not open to Negroes. One businessman, when questioned about this, said: "It can't be done in this town; people won't come to your place of business."

In Michigan where the survey was made, and where there are comparatively few Negroes, there is a law against racial discrimination, carrying a heavy fine and prison sentence for violations.

The average merchant simply throws up his hands: law or no law, it was a matter of self-preservation, he says; they would not be patronized by white trade if they catered to colored, and would go broke.

From the above, it would appear that laws cannot change human nature and that no power is strong enough to force whites to accept Negroes upon the basis of social equality.

Abraham Lincoln showed great wisdom when he said *"there is a physical difference between white and black races which I believe will forever forbid the two races living together on terms of social and political equality."*

Southern Textile Association Issue

This issue of TEXTILE BULLETIN is devoted almost exclusively to accounts of the recent Southern Textile Association convention and S. T. A. divisional meetings which were held this Spring. In order to publish the proceedings of

these gatherings, the editors have had to hold out several regular TEXTILE BULLETIN features. We think our readers will agree that the work of the Southern Textile Association is certainly of sufficient importance to warrant our allotting so much space to coverage of the organization's activities.

Eighty Years In Loom Supplies

Elsewhere in this issue we are publishing a notice of the consolidation of four affiliated manufacturers of loom supplies into the Bullard Clark Co., with W. Irving Bullard of Charlotte, N. C., as chairman of the board and Edward Jacobs Bullard of Danielson, Conn., as president.

The parent company was established in 1869 by Edward H. and Frederick A. Jacobs of Danielson, Conn. During their 80 years of service to the textile industry, the Jacobs firms have done much research upon loom supplies, especially pickers.

We congratulate them upon reaching their 80th birthday in such a strong and virile condition.

Protection For Industries

We feel that the United States should assist Europe and the Far East to recover from the war but at the same time do not feel that the economic recovery of the world should be at the expense of the industries of the United States.

Under House Resolution 6556, which passed the House 234 to 149, the Congress, acting upon information furnished by the Tariff Commission, will determine the tariff rather than leave them to interdepartmental trade agreements.

The Department of State, which seems at times to be more concerned with the plight of our foreign competitors than with the welfare of the American workers, may take action which will wreck the business of American industries.

The Senate Finance Committee has been holding hearings upon H. R. 6556, and letters to senators may prevent American mills from being shut down by reason of competition with foreign goods produced by low-paid labor.

TEXTILE INDUSTRY SCHEDULE

July 22-24—Ninth annual COTTON RESEARCH CONGRESS, Dallas, Tex.

July 24—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Atlanta, Ga.

Sept. 25—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Columbus, Ga.

Sept. 27-Oct. 1—Third NATIONAL PLASTICS EXPOSITION, Grand Central Palace, New York, N. Y.

Oct. 4-9—15th SOUTHERN TEXTILE EXPOSITION, Textile Hall, Greenville, S. C.

Oct. 14-15—Annual meeting, NORTH CAROLINA COTTON MANUFACTURERS ASSOCIATION, Carolina Hotel, Pinehurst, N. C.

Oct. 21-23—Annual convention, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Sheraton-Bon Air Hotel, Augusta, Ga.

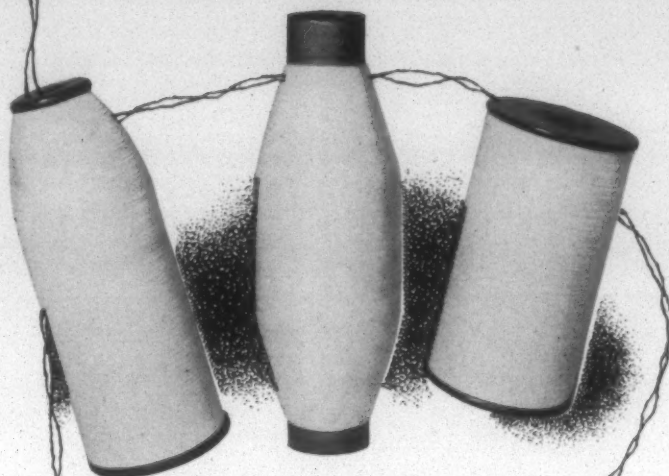
Dec. 4—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Atlanta, Ga.

March 7-9—Annual meeting, NATIONAL COTTON COUNCIL, Los Angeles, Cal.

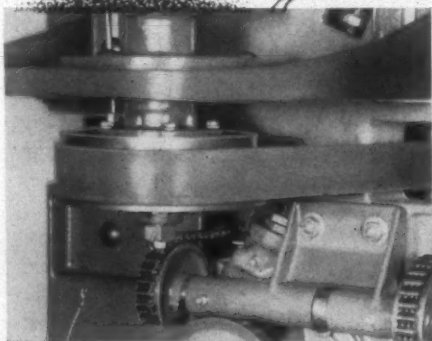
March 31-April 2—Annual convention, AMERICAN COTTON MANUFACTURERS ASSOCIATION, Palm Beach-Biltmore Hotel, Palm Beach, Fla.

Looks Well
ON ANY
SHAPE

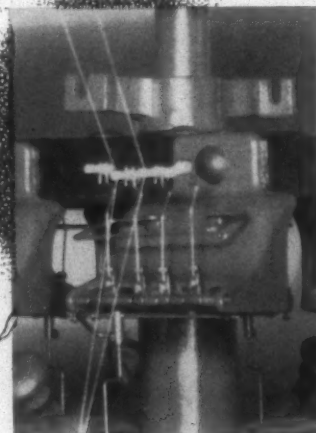
*...tall, short
or stout*



Atwood Model 10 Ring Twister gives you a choice of three package shapes — tapered top, double-tapered or straight wind. On *any* shape, twist is uniform, winding smooth, yarn clean — because of these quality controls.

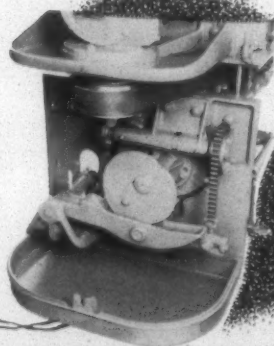


One endless, lapless Atwood drive belt serves all 100 spindles, delivering equal power to each spindle. Constant spindle speed means accurate twist from spindle to spindle.



Automatic stop motion stops *individual* spindle and feed roll simultaneously, so knots can be tied in single ends. This eliminates roller laps and single ends in the package.

The accelerated cam used in the taper top builder motion results in each layer of yarn being constantly covered, so that there is no soilage and the finished package is smooth and clean.



*The Ring Twister with Automatic Stop Motion
for Every End and Ply*

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ATWOOD DIVISION



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Textile Scenery

THE streets are full of traffic at midnight, young men stand on the corner by the dozen and the cop says you can leave your car parked at the curb with all baggage inside and no worry, because he always will be on patrol up and down. This is the heart of the world's greatest and busiest textile industry.

The streets are full of traffic at midnight because the 11 o'clock shift in the mills has just changed. The young men are waiting for young women who have just got off work, as the young men have. The young men and young women are about to drop in on eating places and other establishments for relaxation. The cops are around to see that relaxation does not relax too vigorously.

The North Carolina mill country is as far from any literary version of the Old South as North Dakota is from New Orleans' crab gumbo. On these Piedmont slopes are the busiest mills in the world, and all day and all night, up and down U. S. Highway No. 29, roar the busiest trucks in the world.

The roaring of the mills and the roaring of the trucks, day and night, Summer and Winter, Spring and Fall, Sundays and weekdays, long ago drowned out the mockingbirds in the Carolina Piedmont, if any there ever were. This is hard-working country, and in it lives the world's finest industrial working force of long-time native stock.

In no other nation, except perhaps Russia, is a native-born, home-bred and home-grown population of able working men and women so busy both at working and at replenishing their race. The Russians work under orders of the state. These Anglo-Saxons of the ancient American race, which cleared these parts of Indians and forest all through a century of fierce struggle, are nobody's slave-laborers. They work for money, and they know what the money's for and what it means to them.

For here, young people can and do marry without fear and bring up children without fear. Here everybody

knows where he can go if the worst comes to the worst. Here people keep cows and pigs, work their gardens, spend money when they have it and when they don't get by without it because they know how to do that. They learned to live without money from their mothers and fathers, who had to do that back in the days when there was no industry in the Piedmont and no visible prospect of anything like this present stunning spectacle.

How this great industrial area came to be is just one of those amazing American tales, but true. In the slack and deadly ruin that followed the Civil War, no place in all America was seemingly less likely to succeed than this Carolina back country. The only thing people knew how to do was grow a little tobacco and cotton. But what to do with it after that?

They knew you don't get something for nothing, no matter how you lie. They went to work in these hills not to build a bigger bureaucracy, but to make these old hills pay their way. And so, behind the little tobacco plants came the power dams and behind the dams came the spindles of the cotton mills, one after another, and behind those the box factories and the saw mills and the rayon plants and the cellulose converters.

And then the retail outlets, to sell the goods of New York and the world to these people making goods for the world. It was a magic performance, a gigantic creation of wealth where no wealth was before.

Who would try such a thing today? Who has the capital and who has the will to risk it, if he has? Today, taxation eats away at the remnants of the great fortunes that risked the expansion of these mills. No new fortunes are coming on for the next round. Growth is strangled, and not only America but the world suffers.

Here in these hills the withering hand of government is fighting the very life that makes the mills roar and the trucks thunder in the night. When will the taxpayers begin to force that withering hand to move back and let life alone?—*Frank Waldrop*, writing from Concord, N. C., in the *Washington, D. C., Times-Herald*.

Profits and Wages

SOME people seem to think that if no profits were made at all, the workers would get more wages. This cannot be so. My belief is that the part of the sales dollar called profits actually helps the workers more than it helps anyone else. More than that, I believe it can be proved that the part of the sales dollar called PROFITS actually helps labor more than does the part of the sales dollar called wages.

Fifty years ago it required eight hours work for one man to shape the top of a gasoline tank for an automobile. He was paid less than \$1 for the job, which he did by hand. Finally, the automobile idea caught on and vehicles sold. From profits, the companies have continually built up better and better plants. Tools are good and efficient. Working conditions are always being improved. Profits have brought all these things.

Was it wages that enabled the worker to increase his pay ten-fold? Just asking for higher wages didn't mean that they were forthcoming. There was more to it than that. It was profits that built the improved plant, and bought the improved tools. Had no profits been made the workers would still be working for \$1 a day, or less. This is not difficult reasoning, but it shows what profits are worth to the workers.

What about the public? If the modern automobile like the Ford or Chevrolet had to be made by hand, it would cost \$50,000 to make at present wages. Yet, with modern tools it is made and sold for less than \$2,000.

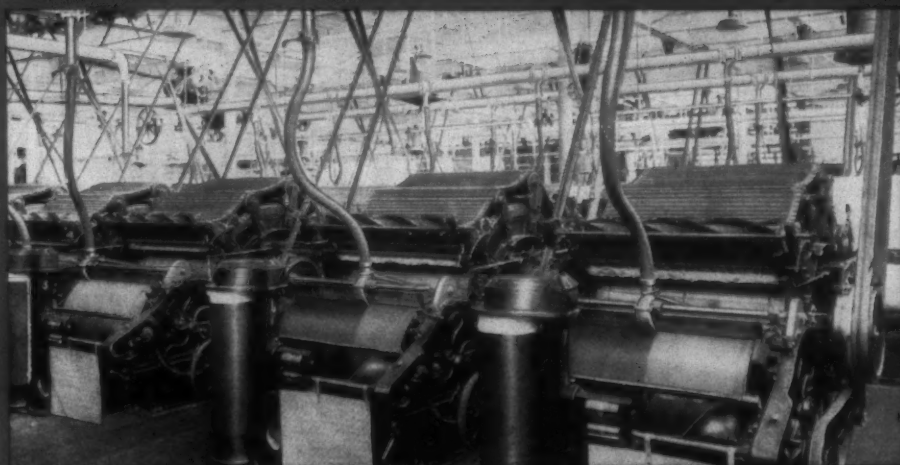
This money for modern plants and efficient tools can come from only two places: from profits, or from loans. But the business that is not making profits cannot borrow for long. In reality, then, this money must come from profits. Better plants and tools couldn't be had without profits. If we stop profits we stop increases in wages and we stop the march of production toward lower prices. That way, we injure both workers and the public. — *George S. Benson*, president of Harding College, Searcy, Ark.



We make our card stripping
PAY DIVIDENDS —
4% greater production per card

ABINGTON

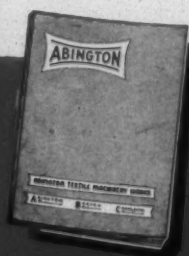
VACUUM CARD STRIPPING SYSTEM



Here is a card room in which 554 cards are equipped with the Abington Vacuum Stripper. This system automatically strips cylinder and doffer in one operation. One man can strip 675 cards per 8-hr. shift. In addition, Waste Stations are provided which collect flat strips, comb nail and other process waste, all waste and strips being delivered by vacuum piping to a central waste house, which may be located within or outside the main mill.

In hundreds of mills, results like these---

**Request:
"COTTON
STRIPPER
CATALOG"**



Nearly 900 mills have turned a nuisance operation into an advantage, obtaining greater production, improved quality and lower costs, as follows:

1. Production increased 4% or more because of less down time for stripping.
2. Direct stripping cost reduced 60% to 90%.
3. Stripping 100% by vacuum (no brush touches the clothing) keeps card wires in better condition with less frequent grinding.
4. Extra thorough stripping gives cleaner silver, less fly, better quality of product. 100% dust free.

One mill states: "One man alone strips 225 cards 3 times daily." Another says: "We only have to grind 2/3 as often to keep wires in good condition."

Write NOW for full information

ABINGTON TEXTILE MCHY. WKS. VACUUM CARD STRIPPERS
YARN DYEING SYSTEMS • WEAVER'S KNOTTERS

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Home office: 19 Congress St., Boston, Mass.

Southern office: Johnston Bldg., Charlotte, N. C.

Are Your Ducks in these Rows?

MORE PRODUCTION

AT LESS COST

Here's how you can get lined up to meet present day requirements of volume textile production.

With the help of one of the South's oldest and most experienced sheet metal plants you can gear your preparatory machinery to modern competition. You can insure uninterrupted production right from the start with precision made sheet metal parts. You can rely on quality products made and delivered with prompt dependable service. You can realize substantial savings.

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GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA

A SHEET METAL WORKS SERVING TEXTILE MILLS

PIVOTAN



AMERICA'S FINEST LEATHER BELTING

These are no idle words, as Textile manufacturers who have tried and proven the superior quality of PIVOTAN will readily tell you.

Processed and manufactured from start to finish with the idea of doing one job well, low-stretch, extra-grip, long-service PIVOTAN gives that extra measure of service textile manufacturers are seeking.

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Manufacturers & Warehouse Distributors

LEATHER
BELTING

RUBBER
BELTING

V-BELTS
& SHEAVES

FIBER & METAL
PULLEYS

ROCKWOOD-SOUTHERN
PIVOTED MOTOR DRIVES

WESTINGHOUSE
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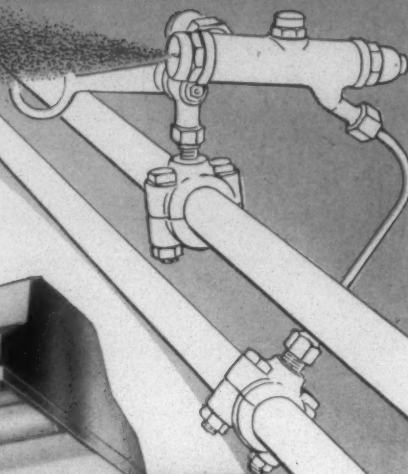
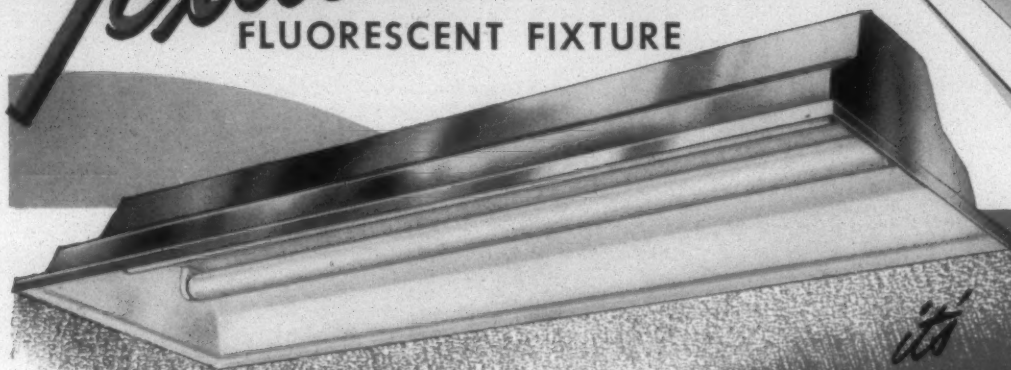
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BEAT THE MOISTURE PROBLEM

with the New

Textilume

FLUORESCENT FIXTURE



SPECIFICALLY DESIGNED for textile mills, this new Wheeler fixture defies moisture fully as well as it reflects light. Its smooth, vitreous porcelain enamel surface, inside and out, offers no exposed seams or joints to catch water and cause rust. With a flick of a cloth, its surface is easily restored to its original lustre. This highly important protection pays off in better light, *longer* . . . and simpler maintenance.

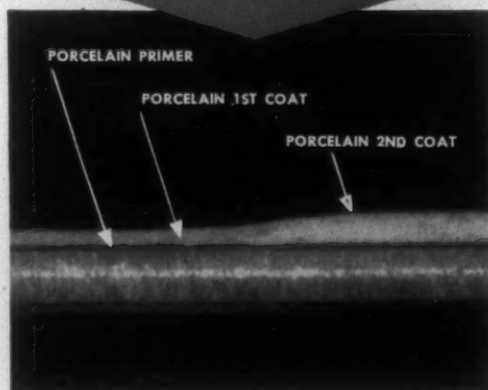
All parts of the Textilume are readily accessible. Suspension flanges are cadmium plated and gasketed. Its "Flex-Loc" safety lampholders are the latest type . . . automatically self-adjusting to variations in lamp lengths.

By installing Wheeler Textilumes, you avoid moisture problems that threaten your new investment. You improve your lighting facilities with fixtures known for "lowest cost in the long run." Write for complete details. **Wheeler Reflector Co., 275 Congress St., Boston 10, Mass.**

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it's
TRIPLE-GUARDED

by
**VITREOUS
PORCELAIN
ENAMEL**



ACTUAL PHOTO (magnified 7½ times) showing cross-section of steel sheet with 1st, 2nd and 3rd Vitreous Porcelain Enamel coatings used on Wheeler Units.



RLM SOLID NECK INCANDESCENT REFLECTOR (at left) provides maximum lighting efficiency indoors or out. Ruggedly built. Vitreous enamel only. 75 to 1500 watts.

Wheeler REFLECTORS

SKILLED LIGHTING

MADE BY SPECIALISTS IN LIGHTING EQUIPMENT SINCE 1881



The 39th Southern Textile Association Convention

THE Southern Textile Association's 39th annual convention drew an attendance of nearly 350 persons at Myrtle Beach, S. C., this year, and resulted in the elevation of Robert T. Stutts (superintendent of Woodside Mills at Fountain Inn, S. C.) to the group's presidency. This year's meeting took place May 13-15 in the Ocean Forest Hotel. Mr. Stutts succeeds Virgil E. McDowell, assistant superintendent of Rosemary Mfg. Co. at Roanoke Rapids, N. C., who in turn becomes executive secretary by virtue of a change in the S. T. A. by-laws. Smith Crow, general superintendent of Erlanger Mills, Inc., Lexington, N. C., and a vice-president of Leward Cotton Mills at Worthville, N. C., replaces Mr. Stutts as vice-president of the organization. The position of chairman of the board of governors, vacated by Mr. Crow, was given to W. Earl Crenshaw, general superintendent of carding and spinning for Springs Cotton Mills, with headquarters at Lancaster, S. C. The immediate past executive secretary is John M. Caughman, general superintendent of Spartan Mills at Spartanburg, S. C., who was S. T. A. president during 1946-47.

New members of the board of governors, whose terms will expire in 1951, include: T. I. Stafford, general superintendent of Clifton (S. C.) Mfg. Co.; D. A. Purcell, superintendent of blanket and sheeting plant, Fieldcrest Mills, Draper, N. C.; J. T. Chalmers, superintendent of Orr Cotton Mills, Anderson, S. C.; and Sherman Baysinger, superintendent of the White Oak Plant, Cone Mills Corp., Greensboro, N. C. They replace Harry Shealy of Columbia, S. C., W. G. Huguley of Bath, S. C., Jesse M. Jones of Shannon, Ga., and J. V. Randall of Salisbury, N. C. Mr. Crenshaw, who was a member of the board of governors and slated to remain on it until 1950, will have his term completed by Dwight L. Thomas, manager of the Fort Mill, S. C., plant of Springs Cotton Mills.

Convention activities got underway Thursday afternoon when the Associate Members Division, made up of persons representing firms which furnish services or supplies to the South's textile mills, was host at a social hour. This was followed by the annual Associate Members Division banquet at which Dallas Neese (Odell Supply Co., Greensboro, N. C.), then chairman of the division, was master of ceremonies. A floor show underwritten by the Associate Members Division and a dance completed the evening's activities.

Mr. McDowell presided at the first S. T. A. business session Friday morning, when addresses were made by Thomas D. Yutz, counsel for the Cotton Textile Mills Industry-wide Committee on Public Relations, and J. Melville Broughton, former governor of North Carolina and now

a nominee for the United States Senate. Abstracts of their addresses are published in this issue. Recreation offered Friday afternoon consisted of a golf tournament at the Ocean Forest Country Club directed by W. S. Terrell of the Terrell Co., Charlotte, N. C., as well as bingo and setback contests at the hotel. Prize winners were announced at the S. T. A. banquet that night, when Mr. McDowell was master of ceremonies. A second floor show sponsored by the Associate Members Division, followed by another dance, wound up Friday doings.

Golf prize winners in the mill men's category were: low gross, James A. Chapman, Jr., of Riverdale Mills, Enoree, S. C.; second low gross, D. A. Purcell of Fieldcrest Mills; low net, M. Weldon Rogers of Ely Walker Dry Goods Co., St. Louis, Mo.; second low net, C. W. Gunter of Mooresville (N. C.) Mills; consolation, Charles Ibach, Jr., then a student at the North Carolina State College School of Textiles, Raleigh. Winning in the associate members category were: low gross, E. T. Hughes of Gulf Oil Corp., Atlanta, Ga.; second low gross, James Isom of Olney Paint Co., Spartanburg; low net, John Reed of Ashworth Bros., Inc., Charlotte; second low net, Ben Stegall of Seydel-Woolley & Co., Charlotte; consolation, L. L. Fronenberger, Bullard Clark Co., Charlotte. Permanent trophies in the tournament, and donors, are as follows: Corn Products Sales Co., silver bowl to mill man low gross winner; Charlotte Textile Club, cup to mill man low net winner; and TEXTILE BULLETIN, cup to associate member low net winner.

Mr. McDowell opened the final business session Saturday morning by delivering the annual retiring president's address. He was followed by Capt. A. A. Nicholson, assistant to the vice-president of the Texas Co., and Col. W. J. Martin, assistant chief, research and testing division, cotton branch, Production and Marketing Administration, United States Department of Agriculture. Captain Nicholson said that no industry has made any greater contribution to the national economy than the textile industry. He warned that in the face of trying times which "we will have for many years to come" the industry must work harder and harder to overcome all obstacles in the way of its progress. He stressed the value and importance of good relations between management and workers. The remarks of Mr. McDowell and Colonel Martin are published in this issue.

Resolutions were adopted expressing regret at the death last April of Thomas Wilson Mullen, one of the most active members in S. T. A. history, and thanking the Associate Members Division for the entertainment and other features provided by it during the convention. The resolu-

tion relative to Mr. Mullen, who had been superintendent, general superintendent and finally vice-president of Rosemary Mfg. Co., said, in part:

We, as members of the S. T. A., have known him best as a member and officer of this association. He became a member in 1918 but because of his modesty and retiring disposition, his ability and fine character was not immediately recognized, but as other members of the association learned to know him and appreciate his worth, he was placed on the board of governors in 1926; was elected chairman of the board in 1929; vice-president in 1930; and president in 1931. His record as president was outstanding for capable leadership, his wise counsel, and his constructive ideas. Since his term as president he has been one of the mainstays of the association and has been continually asked for his wise counsel and advice, and has always responded in a constructive way.

We, the members of the Southern Textile Association, realize that we have lost a friend, a wise counselor, a constructive thinker, and a great leader. A man of the highest ideals and integrity of character, and one of God's real noblemen, a Christian gentleman.

The proposed change in S. T. A. by-laws, by which the office of executive secretary shall automatically devolve each year on the outgoing president and that the office be held for one year, was adopted. Following the nominating committee's report, the new slate of officers and board members was elected. Presentation of the Past President's Medal to Mr. McDowell was made by E. C. Horner, assistant superintendent of J. M. Odell Mfg. Co., Bynum, N. C. At a brief meeting of the new board of governors, F. E. Bozeman, Jr., of Dan River Mills, Inc., Danville, Va., was ap-

pointed the board's representative on the S. T. A. executive committee.

P. G. Wear of Penick & Ford Sales Co., Atlanta, was elevated from vice-chairman to chairman of the Associate Members Division. Charles H. Campbell of Sonoco Products Co., Hartsville, S. C., was elected vice-chairman, and Junius M. Smith of TEXTILE BULLETIN was re-elected secretary-treasurer. Mr. Neese explained that an executive council to take under advisement future nominations for officers and other business had been created. Ten members were elected to that council following nominations advanced by a committee. Five of these will serve for a two-year term beginning immediately and the other five will serve for a short, or one year term. Future elections to the council will be on a two-year basis, assuring that at least one-half of the council will be composed of new members each year.

Elected for two-year terms were: Charles Gunter, Jr., *Daily News Record*, Charlotte, N. C.; Harold H. Jordan, Armstrong Cork Co., Greensboro, N. C.; Clyde T. Lassiter, Penick & Ford Sales Co., Greensboro, N. C.; J. O. Cole, Dayton Rubber Co., Greenville, S. C., and Vassar Woolley, Seydel-Woolley Co., Atlanta. Elected for one-year terms were: W. S. Terrell, the Terrel Co., Charlotte, N. C.; W. L. Jackson, Industrial Rayon Corp., and Dan M. Beattie, American Paper Tube Co., both of Greenville, S. C.; Earle Mauldin, *Textile World*, Atlanta, and J. Alden Simpson, Corn Products Sales Co., Greenville.

At a meeting of the new council Mr. Neese was named to the newly-created post of council chairman, and it was decided that the retiring Associate Members Division chairman would in the future automatically serve as council chairman for one year. The following firms and individuals contributed to the Associate Members Division convention fund: Abbott Machine Co., Acme Loom Harness & Reed Co., Aldrich Machine Works, Jack Alexander, American Pulley Co., American Viscose Corp., *American Wool & Cotton Reporter*, Andrews Co., Armstrong Cork Co., Arnold, Hoffman & Co., Inc., Ashworth Bros., Inc., Atlanta Belting Co., Atlanta Brush Co., Bahan Textile Machinery Co., Barber-Colman Co., Barkley Machine Works, Becco Sales Corp., Blackman-Uhler Co., Inc., Bowen-Hunter Bobbin Co., Bryant Electric Repair Co., Bullard Clark Co., Carolina Brush Co., A. B. Carter, Inc., Clinton Industries, Inc., Cocker Machine & Foundry Co., Corn Products Sales Co., The Dana S. Courtney Co., Crompton & Knowles Loom Works, Curtis & Marble Machine Co., Roger W. Culter, W. D. Dodenhoff Co., Draper Corp., Duke Power Co., E. I. du Pont de Nemours & Co. (Finishes Div.), E. I. du Pont de Nemours & Co. (Dyestuff Div.), Emmons Loom Harness Co., Ferguson Gear Co., Fields Mfg. Co., Foster Machine Co., Robert Gantz, Gastonia Mill Supply Co., Gates Rubber Co., Greenville Textile Supply Co., Grinnell Co., Gulf Oil Corp., H & B American Machine Co., Hart Products Corp., Hickory Handle & Mfg. Co., Hollister-Moreland Co., Howard Bros. Mfg. Co., Hunt Machine Works, Inc., Huntington & Guerry, Inc., Ideal Machine Shops, Inc., Industrial Supply Co., Jenkins Metal Shops, Inc., Kearney Mfg. Co., Keever Starch Co., Oliver D. Landis, A. C. Lawrence Leather Co., Ralph E. Loper Co., McLeod Leather & Belting Co., Manhattan Rubber Mfg. Div. of Raybestos-Manhattan, Inc., Meadows Mfg. Co., Byrd Miller, Montgomery & Craw-

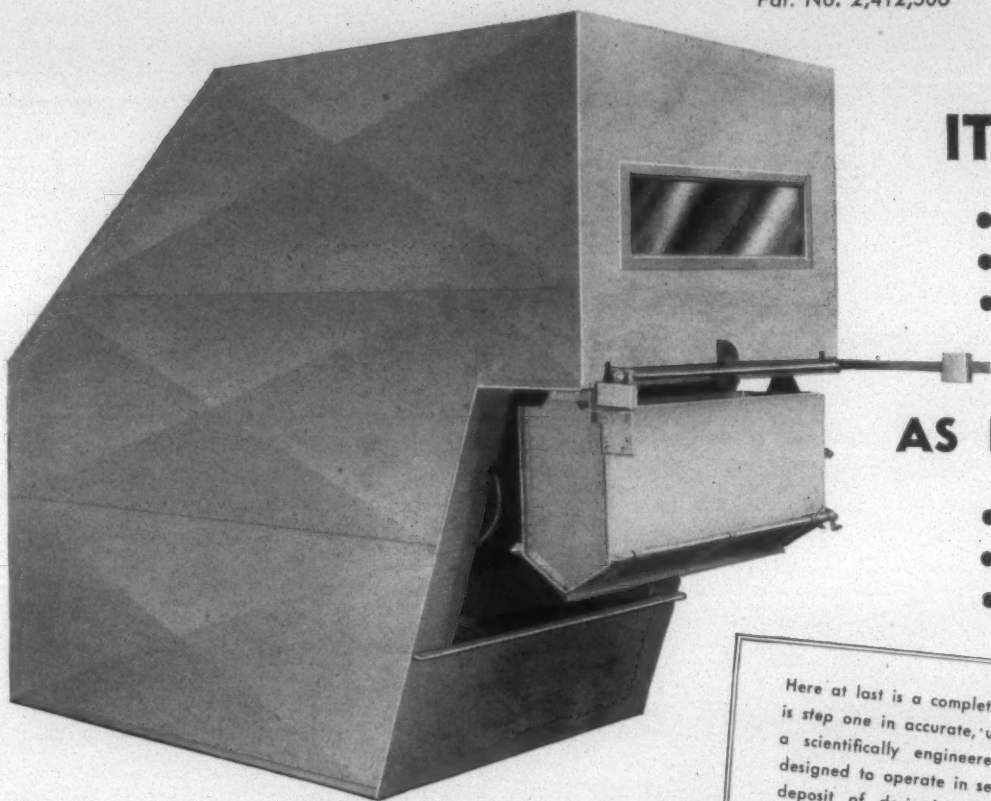


At top, left to right, the Friday morning speakers: Thomas A. Smith and the Hon. J. Melville Broughton. Saturday session speakers, shown below: Capt. A. A. Nicholson and Col. William J. Martin.

IS BLENDING YOUR HEADACHE?

"FIBER METER"

Pat. No. 2,412,506



Manufacturer
Houdaille-Hershey Corporation
Buffalo, N. Y.

IT SAVES

- TIME
- LABOR
- MONEY

AS IT WEIGHS

- AUTOMATICALLY
- ACCURATELY
- DEPENDABLY

Here at last is a completely automatic feeder that is step one in accurate, uniform blending. Here is a scientifically engineered and constructed unit designed to operate in series for the simultaneous deposit of desired weights in any proportions.

It Takes the "Guess" out - Puts Profits In

- 1 Weighing mechanism delivers accurate amounts in any proportion. Will deliver 200 to 500 pounds per hour in accurate weights from 8 ounces to 32 ounces in 1 ounce increments. A viscous dampener is incorporated in the weighing system to insure constant, accurate operation.
- 2 Body of heavy gauge steel, welded construction. Weighing mechanism and components entirely of aluminum, suspended on spring steel straps.
- 3 Design incorporates automotive and aircraft principles of strength, rigidity and lightness applied for the first time to the textile machinery field.
- 4 Enclosed mechanism reduces fire hazard — promotes cleanliness and accident prevention.
- 5 Operation completely visible through Plexiglas windows to lighted interior.
- 6 Bearings are sealed, self-aligning, ball type requiring lubrication only twice a year.
- 7 Loading chute easily removable for cleaning.
- 8 1 HP motor for low operating costs.
- 9 Light weight and movable. Mounted on casters, if desired.
- 10 Delivered completely equipped and ready for operation. Installed by our own engineers.

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ford, Inc., Moreland Chemical Co., National Ring Traveler Co., New York & New Jersey Lubricant Co., Frank G. North Co., Odell Mill Supply Co., Olney Paint Co., Parks-Cramer Co., Penick & Ford, Ltd., Inc., Belton C. Plowden, Ragan Ring Co., J. E. Rhoads & Sons, Robert & Co. Associates, Inc., R. B. Rowland, B. S. Roy & Son Co., Saco-Lowell Shops, Seydel-Woolley & Co., Sherwin-Williams Co., Slip-Not Belting Corp., Sinclair Refining Co., Sonoco Products Co., Southern Belting Co., Staley Sales Corp., Southern Standard Mill Supply Co., Steel Heddle Mfg. Co., Stein, Hall & Co., Stodghill & Co., Jos. Sykes Bros., Taylor-Colquitt Co., Taylor Instrument Cos., the Terrell Co., Textile Apron Co., TEXTILE BULLETIN, *Textile Industries*, the Textile Shops, Textile Specialty Co., *Textile World*, John C. Turner, U. S. Ring Traveler Co., Universal Winding Co., U S Bobbin & Shuttle Co., Veeder-Root, Inc., Victor Ring Traveler Co., WAK Industries, Inc., Walker Mfg. Co., Watson & Desmond, Westinghouse Elec. & Mfg. Corp. and Whitin Machine Works.

Thomas D. Yutzy

IN one respect, public relations is like the weather. We always have it. Weather is certainly universal. It's unrationed, unrestricted and unpreventable. Sometimes it's good and sometimes it's not so good—as during this past winter. But good or bad, each day brings more weather, and even while we sleep, the weather goes right on.

Much the same can be said of public relations. We always have public relations. Maybe you'd rather not have any public relations, but you will. Like it or not, you always have public relations. You can't avoid it.

Some people and industries have good public relations; others have bad public relations. Good or bad, everybody has public relations and some have more than others. The

textile manufacturing industry, for example, has more public relations than any industry I know of, because this industry has more direct contacts with the public than any other.

The reason everyone had public relations is due to the fact that people are continuously forming opinions about other people. There's no way to prevent this happening, ever. So we have public opinion, which is simply the aggregate of the opinions of many individuals. We all know that public opinion is a very potent force. Unfortunately public opinion is formed largely on second-hand information. Most people get their impressions from and through other people. They form their opinions by what they read in newspapers, magazines and in books, or hear over the radio, or by what other people tell them in direct contact. Very few ever see at first hand the thing or the individual about whom they form opinions. So you have public relations with people who have never seen you and whom you will never meet. Remote as they may seem, they can exert a considerable influence in your affairs.

Even the "no opinion" group that shows up in every public opinion poll must be reckoned with in public relations. To disregard them because they are not actively hostile to you is risky. Their lack of opinion stems from a lack of knowledge, or from the fact they have not made up their minds. In either case, they are fertile fields for the propaganda that can and often does swing them from the "no opinion" to the "unfavorable opinion" group. For this reason, even the "no opinion" groups must be regarded as an active public relations factor.

Once we see that we always have public relations—all of us—whether we like it or not, we then see that it's good business to strive for good public relations. When you can't avoid something, you try to make the best of it.

This is the kind of common sense that inspired the industry-wide public relations program which some of you are helping to support. A group of executives well known to all of you decided about two years ago that this industry deserved to be better understood, deserved better treatment



Pictured are officials of the Southern Textile Association for 1948. Seated, left to right: Virgil E. McDowell, executive secretary and immediate past president; Smith Crow, vice-president; Robert T. Stutts, president; W. Earl Crenshaw, chairman of the board of governors; and James T. McAden, Jr., secretary-treasurer. Standing, left to right: F. E. Bozeman, Jr., director; D. L. Thomas, director; J. L. James, director; A. R. Marley, director; D. A. Purcell, director; T. I. Stafford, director; and J. B. Powell, chairman of the Northern North Carolina-Virginia Division.

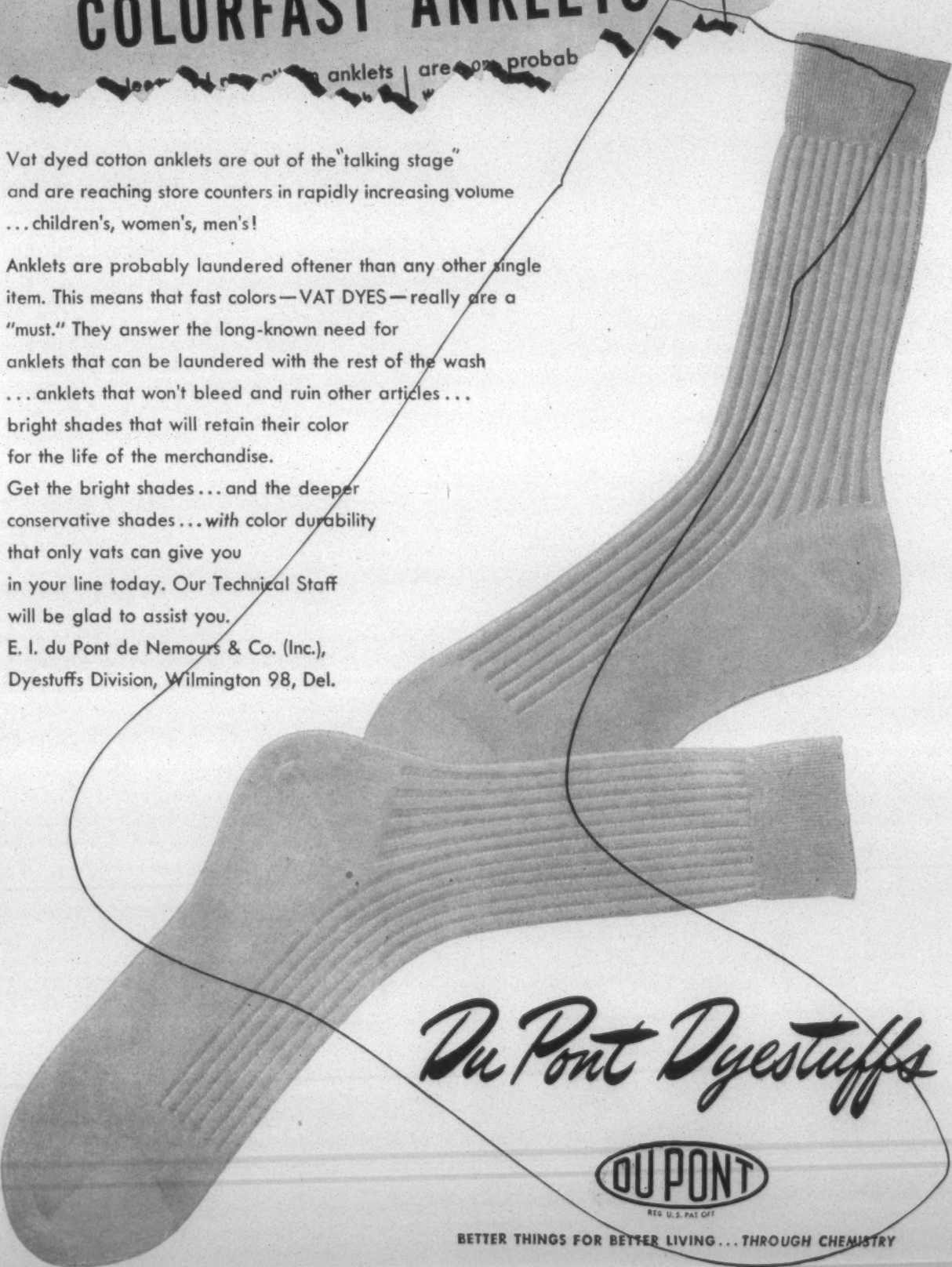
Making Headlines COLORFAST ANKLETS

Vat dyed cotton anklets are out of the "talking stage" and are reaching store counters in rapidly increasing volume ... children's, women's, men's!

Anklets are probably laundered oftener than any other single item. This means that fast colors—VAT DYES—really are a "must." They answer the long-known need for anklets that can be laundered with the rest of the wash ... anklets that won't bleed and ruin other articles ... bright shades that will retain their color for the life of the merchandise.

Get the bright shades ... and the deeper conservative shades ... with color durability that only vats can give you in your line today. Our Technical Staff will be glad to assist you.

E. I. du Pont de Nemours & Co. (Inc.),
Dyestuffs Division, Wilmington 98, Del.



Du Pont Dyestuffs



BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

in Washington, deserved a greater appreciation of its importance to the nation. There was a thoroughly modest ambition based upon a very fair appraisal of the situation. This industry has been misunderstood and it does deserve a very high public rating for the great progress it has made economically, technically and socially, especially during the past decade.

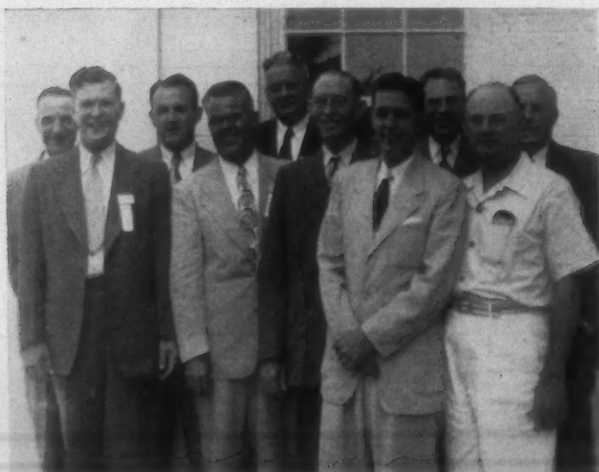
Public opinion polls taken across the country, in both mill and non-mill regions confirmed the belief that too many people were still thinking of this industry as it was 20 years ago. The industry-wide program was launched to bring the public up to date.

In my opinion, public relations is made up of three elements. First, it's an attitude based upon common sense and good will which reflects a genuine desire to be neighborly, considerate of others and to get along with people. The textile industry has this element in abundance. You find it at the top among employees. The second element is the translation of this attitude into the acts of good will and neighborliness. You find this in the textile industry abundantly, too. Third, public relations is the process of making the first two elements known to the public. This third element is especially important when there are forces at work which would make the public distrust your attitude and discredit your acts.

Even this third element was already receiving some attention when the industry-wide program was initiated. Many companies have had excellent public relations in their own communities for a long time. Even more work in the field of community relations is being done today and this is greatly beneficial and even essential. Good public relations does begin at home. But it doesn't end there.

For instance, you may have a fine community, an attractive mill village, your company may have built an auditorium, a swimming pool, etc. It may be doing all kinds of things for its workers and the community. But the United States senator from Idaho may not know that. Or the senator from Michigan, or the representatives from California. In fact, your own senator may not know all that's going on in the textile industry.

Unless someone makes these things known to, for in-



The executive council of the S. T. A. Associate Members Division. Front row, left to right: Dan Beattie, Dallas Neese, Clyde Lassiter, J. Alden Simpson and Vassar Woolley. Back row, left to right: Junius M. Smith, J. O. Cole, P. G. Wear, Harold H. Jordan and Earle Mauldin.

stance, the senators and congressmen, the state legislators, the public, they may go right on thinking of the industry as it was 20 years ago. The splendid things that are being done by so many companies in so many communities must be publicized, for both the industry as a whole and the individual companies themselves to get full benefit from them. That's what the industry-wide public relations program does.

The program was set up independently from any association, although it co-operates closely with all of them, and operates under the direction of an autonomous committee of 21 of the industry's executives.

We supply various media with up-to-date and factual information about the industry. I want to stress the word factual. The days of whitewash have long since gone. To deal in anything other than facts is not only unethical, it isn't even practical. It always boomerangs sooner or later. In the case of this industry, it wouldn't even be expedient because this industry has an abundance of favorable and interesting facts to draw upon. It has both a dramatic and truthful story to tell. Every piece of information issued in this program must first of all be factual.

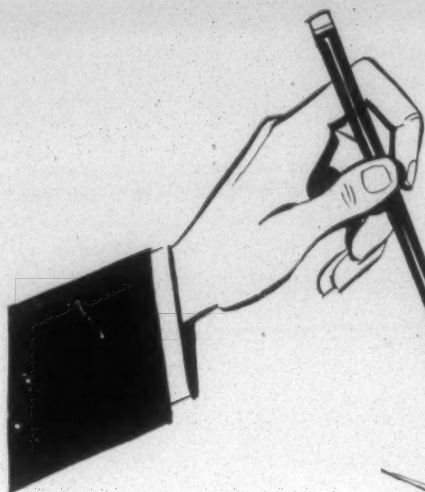
The vehicle we have set up for relaying information to the newspapers we call the Textile Information Service, which is staffed both in the field and in the central office in New York City by experienced, competent newsmen. Through this vehicle and because it maintains high news standards, news stories, articles and photographs telling the story of the industry's progress and importance are now appearing in literally hundreds of newspapers reaching millions of readers.

The program uses other methods of disseminating favorable information about the industry. We have just printed more than 100,000 postcards which are being distributed throughout the textile manufacturing states in the South and New England. When it is remembered that these cards will be going to all parts of the country, we see how their accumulative effect will be considerable.

Another pictorial project just completed is a traveling photo exhibit which was shown for the first time at the New Orleans meeting of the American Cotton Manufacturers Association. This exhibit is made up of 36 photo enlargements presenting attractive scenes of mills and their people at work, at play and around their homes. The exhibit is to be started on a tour of schools, chambers of commerce and other public places in many towns where it will be viewed by thousands.

Information booklets designed for social purposes and aimed at special groups are another sizeable function underway. Just off the press for instance is a pictorial booklet prepared primarily for distribution with the traveling photo exhibit. It contains reproductions of the 36 photographs in the exhibit and editorial text from a previously prepared historical leaflet. Two more booklets have been written and will be issued soon. One deals with the subject of community relations, and the other is designed to interest high school and college students in entering the industry. A still more comprehensive publication is also in the works. It will be a sizeable reference book suitable for teachers, students, editors, writers, libraries, and perhaps even textile executives.

Another type of medium being used in the program now is the lecture platform. Members of the organization, for



**You can't draw good sliver
out of a hat . . .**



**but you can
turn the trick with
MEDLEY
DRAWING!**

. . .and get a uniform, grease-free sliver!

If there is any trick in turning out a uniform, grease-free sliver it is in the Medley sealed-in ball-bearing top drawing rolls with their permanent lubricating feature.

Smooth, even drawing with minimum variation is resulting in more efficient slubbing, roving and spinning in mills using Medley "8 Ends Up" drawing, or the conventional 6 ends up, both employing the now famous Medley metallic drawing rolls and the sealed-in ball-

bearing top rolls. Designed to give up to 13 inch overall roll settings, Medley Drawing will deliver better sliver from cotton, wool, synthetics, ramie or blends.

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example, have recently spoken at several universities and before business clubs and other groups. Recently, too, we announced the establishment of a six-week lecture course at one of the universities where there has never been any course on the subject.

A number of other things are in the works but I won't bore you with the details. You operating executives can help the program tremendously; in fact, you can give more help than any other group. You are in a strategic position as a source of the kind of information we need. Your ideas and suggestions will be very welcome.

Actually this program deals not alone with the cotton system but also with the American system. The cotton textile manufacturing industry is a great symbol of a free economy. The public's understanding of it and attitude toward it can have a crucial bearing in the struggle that we know is now going on against the forces which would destroy all freedom.

We must somehow convey a clear and correct picture of this industry to the public whose decision it always is as to the kind of a system we have.

J. Melville Broughton

A PERIL that gravely concerns every thoughtful American is jeopardizing our economic life. It is the dizzy spiral in the high cost of living. This threat is appalling in its possible consequences. It ranks with Communism and war in its evil implications. This group, many of whom are eminent in the field of business and industry, cannot alone solve so disturbing a problem. None of us, however, can escape the responsibility of facing and helping to meet this crisis which is assuming disastrous proportions.

National leaders, in government and industry, are virtually in agreement that a tremendously increased volume of production in all essential lines is the only real solution. Without it, the inflationary spiral may well bring swift disaster. Management and labor alike, along with the general public, will suffer a devastating toll unless present trends are speedily checked.

While the shocking increase in the cost of food presents the most acute aspect of the current crisis, a casual study of

charts and statistics will reveal that the cost of virtually every essential commodity for home and farm and consumption is rising to stratospheric heights. A realistic survey, in the light of history, gives genuine cause for national alarm. The familiar circle is whirling almost with the velocity of a tropical hurricane. As the cost of commodities rises, labor seeks and usually gets an increase based on increased cost of living. The price of commodities must then be raised to absorb increased labor costs. And so it goes.

A very large segment of the public, including widows, the aged and dependent, clerical workers, teachers and hundreds of thousands of veterans, are the innocent victims of a crucifying experience. Sporadic boycotts and futile outcries avail them nothing.

In the face of this on-rushing disaster, there is nothing to be gained by name calling or attempted assessment of blame. But much of this is going on. Democratic leaders blame the Republican-dominated Congress, and Republican leaders blame the Democratic administration. There is no time for political bickering. The crisis of the hour calls for patriotism and statesmanship.

In like manner we find labor blaming management, and vice-versa. Both have made mistakes, and each must shoulder its part of the responsibility. Unless this inflationary wave is checked, both will be engulfed in economic disaster. The welfare of the nation as a whole is superior to the rights of either labor or management. This is a time for co-operation and not for labor baiting by management or selfish and arrogant demands by labor.

In the national emergency experienced in the late war, labor and management through co-operation and patriotic endeavor accomplished a miracle of production that amazed the world and won the war. The present critical emergency in time of peace calls no less for minimum of selfish considerations and a maximum of patriotic endeavor. Only thus can the nation avoid a disaster economically worse than war.

The people of all nations cry out for peace. The heart of the world is still in anguish from the bereavements and shock of the last world conflict. And yet who can say that durable peace has been attained? Is it not fearfully true that another world war is in the making? The only hope for world peace is in the humane leadership of America. But this leadership must not only be human; it must be strong and powerful. It must be backed to the limit by the in-



At the head table during the Associate Members Division banquet Thursday night, left to right: Virgil E. McDowell, Mrs. McDowell, Robert T. Stutts, Mrs. Stutts, John M. Caughman, Dallas Neese, Mrs. Smith Crow, Mr. Crow, P. G. Wear and Junius M. Smith.

comparable productive capacity of American industry and agriculture.

Communism is openly gambling on an economic crash in America. If this should occur, its planned world dominance may become a grim reality. This is the dread prospect that threatens every precious attribute of our democratic civilization.

Untold millions of people throughout the earth, prostrate in poverty and enslaved in spirit, are praying that a strong America will lead the world toward prosperity and peace. Our nation may well be the last hope of civilization. In this high destiny we dare not and will not fail.

Virgil E. McDowell

WE come to the close of another association year. Let me express to you my deep appreciation of the privilege and honor I have enjoyed by serving as your president during the past year, and this realization mitigates the pangs of regret that I naturally feel at laying down the duties of this high office which you have conferred on me. Like streamlined speeding vehicles, we acquire with motion a certain momentum which it is difficult to slow down at once.

But my interest in our association will not be affected or lessened by handing over the reins of leadership to my successor, who is ably qualified for this important position, and who will, I feel assured, carry our standard into new and profitable fields of endeavor and success.

The Southern Textile Association is an organization of operating executives. The Southern textile operating executives have a dignified and responsible job. The superintendents and overseers of the textile industry indirectly exercise control over hundreds of millions of dollars worth of mill properties. In other words, we are trustees, having entrusted into our care and keeping millions of dollars worth of property to operate and protect.

Also, there are thousands of employees employed in the mills of the South whose happiness and source of income and philosophy of life are our responsibilities. Can any one of us fail to realize and appreciate the trusteeship of so large a group of people who come to us daily in high expectancy of a fair deal and an equal opportunity and from this faith gather inspiration for loyalty and conscientious performance of duty? I do not believe he can. Such a job as this requires men of character and nobility. The very position proclaims dignity and responsibility, particularly now when the entire thinking of the American people is upset and clashing.

The supervision of operatives and the manufacturing processes, the keeping of people happy and contented, carry a tremendous task that only men of level-headed judgment and experience can discharge. We are living in a new day now, a day of intelligent leadership. A leadership of foresight is the new thought. Leadership of the right type will cause any worker to drive himself to please and satisfy. Only men of brains and big capacities can execute such leadership. In the great field of textile manufacturing one of the primary requirements is a thorough knowledge of the human mind and its reaction to approach and I dare say that no group of men, regardless of their training in the field of psychology, understands this attribute of mankind better than the successful cotton mill operating executive.

The textile manufacturing methods are undergoing rapid

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changes. Science and invention, style and consumer demands are running rampant in this field. Never before in the world's history have its products been so highly specialized. The textile operating executives must always keep abreast of all the new machinery and devices. He must know what they can do and how to make them do it. He must know their significance and value. He must keep himself ready at a moment's notice to manufacture a new weave or design. That means he must keep his mind always alert and ahead of actual demands of his knowledge and skill. So "pick up your yoke," and all praises to the Southern textile operating executive who senses the dignity of his position and is able and willing and does discharge his duties.

There are certain co-operating points that must of necessity be observed when discharging his duties. I am still speaking of the multiplicity of duties which burden the departmental foremen. Keeping the superintendent informed as to conditions; observing and carrying out of all policies; assuming full responsibility for orders given in department. Seeing a fellow overseer's troubles with a desire for help; getting together on differences; creating respect in his own department for men or process of other departments; observing proper industrial ethics in cases of emergency or misunderstanding; listening to grievances or suggestions. Try to be accurate in making promises when work will be done and get job out in time. It is the responsibility of foremen in all departments to maintain sanitary conditions, maintain comfortable conditions, recognize ability, conduct himself in a dignified and respectful manner, try to be neat in appearance. Do not report for work half dressed. I do not mean that a foreman has to overdo it, but a little dignity helps.

I have made these enumerations because I feel the necessity of such a reminder will eradicate from the mind of any "Doubting Thomas" the idea that the job of an operating textile executive is that of a playboy or an indolent person. We have a big job—a responsible job. It is one that requires big minds, clear heads, and fair treatment. We are dealing

with people in our every movement. We must be responsible and able to lead them.

The answer is found in the fundamental pattern of our way of life: freedom to draw upon the total brain capacity of the nation. It is men who dream and carry their dreams into action, who build an unusual nation. Henry Ford dreamed, there was no planning board to veto his imagination and today the nation rides on rubber. Thomas Edison dreamed; the I. Q. planning board would have said that he could not have passed the eighth grade, but night has been turned into day through his dreams. Free men in a free country with free competition to bring out new models has made it possible for every man to send his son to school to dream again.

New machinery, streamlined manufacturing methods, better working conditions, high wages and the many other essentials of industrial good health will fall upon tomorrow's executives. It will be their responsibility for carrying forward the promising "New Era" in textile manufacturing.

We need well developed brains, more brains, a head full of brains. A human brain can never be filled up. If you learn arithmetic, your brain is prepared to take in algebra, calculus and so on; if you learn carding, your brain is ready to take on spinning and winding, it is just itching for weaving. No, that brain of yours can never be filled up, so do not be afraid of overtaxing your brain with knowledge. The Southern Textile Association, through its divisional meetings, gives you knowledge, so take advantage of these opportunities and support the association with money and your best efforts.

Our knowledge is not yet complete. The Southern Textile Association is bent on gaining more knowledge. And I would like to say that it is doing much toward lifting the entire industry to a higher plane, you see evidence of it on every hand.

Every man in the industry should come to realize that the dishonest worker, the man who fails to put in an honest day's work, not only cheats his employer but every other employee as well. For more than 2,600 years men continued to separate the cotton fiber from its seed by hand. It was considered a full year's work for a man to produce 350 pounds of lint cotton. It remained for Eli Whitney, a century and one-half ago, to find and put into operation a better, easier, and quicker way. The Southern Textile Association has gone a long way in advancing and training the right type of men. The work done by the Southern Textile Association is beginning to be appreciated more every day by the Southern mills. How could corporations have achieved such wonders without freedom, machinery, and men like you?

You would not be in your present position without good, sound, systematic training. Your co-workers are entitled to the fruit of experience. The man who is employed for wage is a man of business as much as his employer. Let us prepare ourselves for the day after tomorrow. You are not lacking in personal courage if you have been able to keep your feet on the ground through this present era of conflict and change.

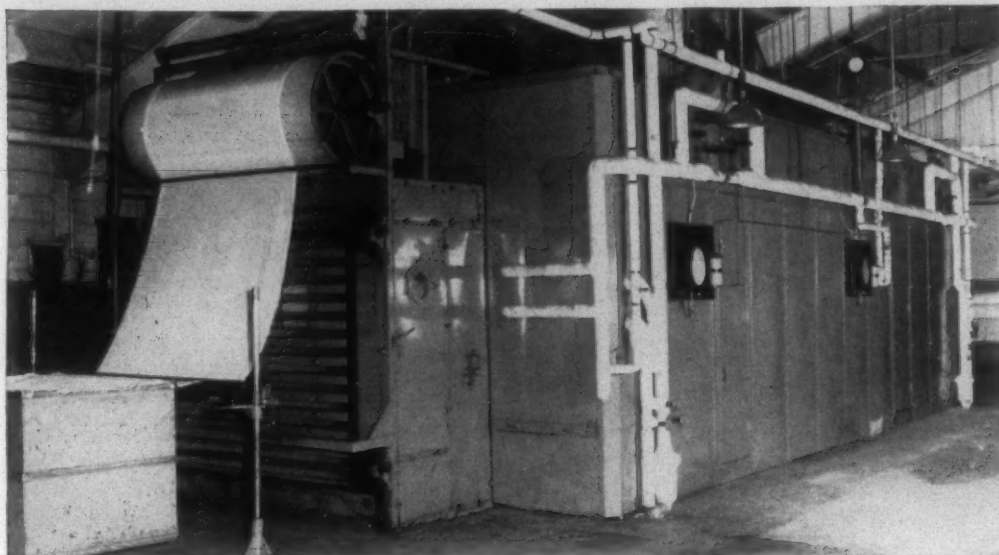
The constitution and by-laws should always be available to all the various division officers; to all the association officers. These officers change from year to year and it does the old officers good to renew the reading of the constitution and by-laws, as well as the new officers. We had copies of the constitution and by-laws printed last year and presented to the officers and board of governors, at the first meeting



Virgil E. McDowell received the S. T. A. Past Presidents' Medal from E. C. Horner, assistant superintendent of J. M. Odell Mfg. Co. at Bynum, N. C.

REFINEMENTS IN LATEST PROCTOR LOOP DRYERS

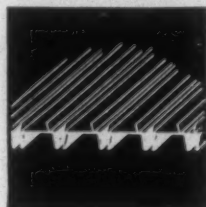
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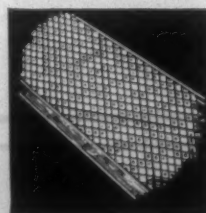
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Improved Floor

The versatile Proctor Loop Dryer now incorporates several refinements in design that make possible a performance that is improved over older types of the same machine.

Girts are now covered with a treated covering that prevents cloth slipping and reduces the danger of "stick marks" in the finished goods. The girts are designed to revolve at given intervals, so that no part of the material is in contact with any part of the girts for any appreciable time.

To aid in forming smooth loops in certain classes of goods, these dryers are equipped with a perfected air looper. A carefully timed jet of air is forced down into the loop as it begins to form, thus assisting in forming better loops even in "difficult" material.

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SOUTHERN TEXTILE ASSOCIATION

of my administration as president, and do you know it was the first time that some of them had ever seen or read the constitution and by-laws? This same story holds good for hundreds of members of the Southern Textile Association. Well, thank goodness, we were fortunate in getting the constitution and by-laws printed in our 1947 "Book of Proceedings" and I hope that this procedure will be continued, so that more people will read them. They probably need revision, some out of date things need to be rescinded and some new ideas need to be added. Alterations and additions are always necessary, even in a mill.

Well, just to tell you the truth, I never knew what the association colors were until I read the constitution and began work on the type of badge we could use for this convention. How many of you know what the colors are? Green and white. How many of you know what the insignia is? Well, part of it is the cotton boll.

Now, for the divisional meetings, let me again refer to the constitution and by-laws. Under Article 2, Section 1, "Objects of the Association," we have: "The objects of this organization are—the promotion of good fellowship and

acquaintance among its members; the conducting of practical mill discussions between the mill men, thereby giving an interchange of ideas and experience among its membership on subjects relating to textile mill operation; and the promotion of such movements as tend to the benefit and advantage of the textile industry; however, labor and wages shall not be discussed."

The divisional chairmen, along with their committees, have worked faithfully and diligently in following most of these objects when planning their division programs. But, I believe, we are falling down on the main object of "practical mill discussions." Technical mill problems on our program are more popular and more knowledge is gained by our arguments. There has been too much speech making, the speeches were good, better than I can do, but our constitution and by-laws say discussions, exchange of ideas even if some of them are crazy.

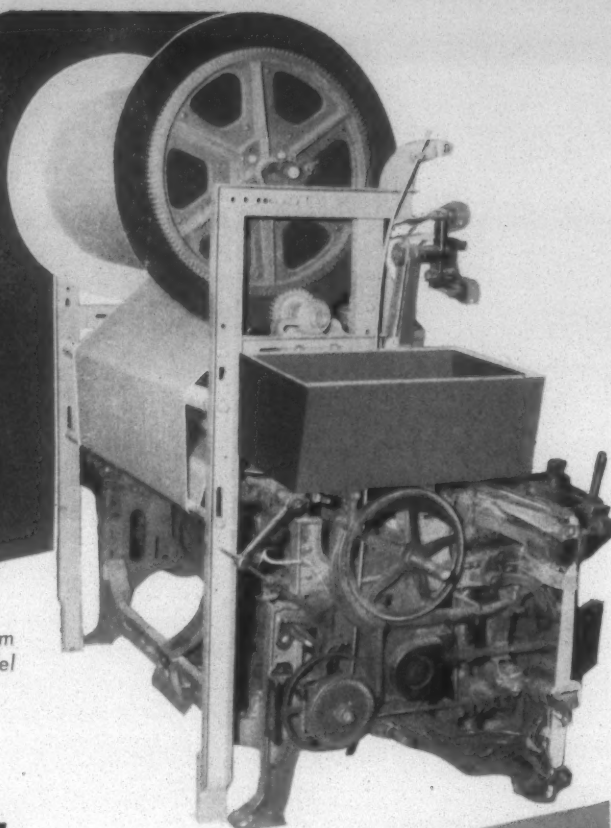
As your president, I attended the South Carolina Division meeting at Clemson College. They had swell attendance, a colorful football game and fed us a real square meal, but speeches took up the program. Next, I attended the Northern North Carolina-Virginia meeting at Danville. They had swell attendance. Dan River Mills was a good host



Random camera shots taken during the Associate Members Division social hour.

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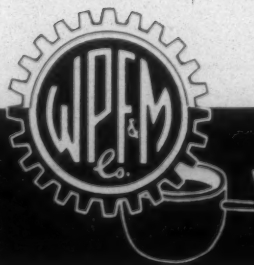
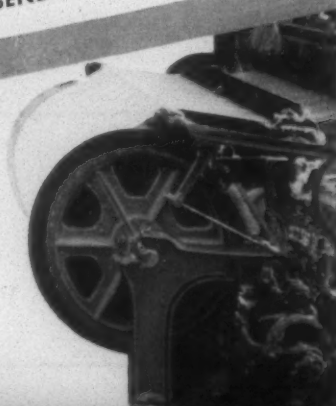
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and we were fed in the cafeteria style, but speeches took up the program. The speeches were swell and covered most of the objects, but discussions—no—no technical problems.

Now, I come to my own division, the Eastern Carolina Division. I attended this Spring's meeting at N. C. State College. Rosemary Mfg. Co. sent 29 men 85 miles there and 85 miles back. They had a good attendance, the program was well planned for part speeches and part discussion, but same old story, speech took up so much time and covered so much territory, only a short discussion developed; time was getting late. Also, I might add, they did not feed me.

I would urge you to support the Southern Textile Association in every way possible. You need the association and the association needs you. Attend the meetings regularly and take an active part in the discussions. Take an active part in officer and committee work and when it comes your turn to become an officer consider it as your opportunity to contribute your full strength to the progress of the association. When you give to your associates one good idea you will generally receive two or more of equal value.

The Southern Textile Association was organized in 1908 and David Clark was instrumental in its set-up. He held out and took the position that the purpose of the Southern Textile Association should be solely for education and composed of mill operating executives. David Clark was elected the first treasurer. All of the first meetings were featured by prepared addresses, and there was seldom any information presented or discussion of practical mill problems. Two men, F. Gordon Cobb and Marshall Dilling, are given credit for contributing the most to the Southern Textile Association's worthwhile existence.

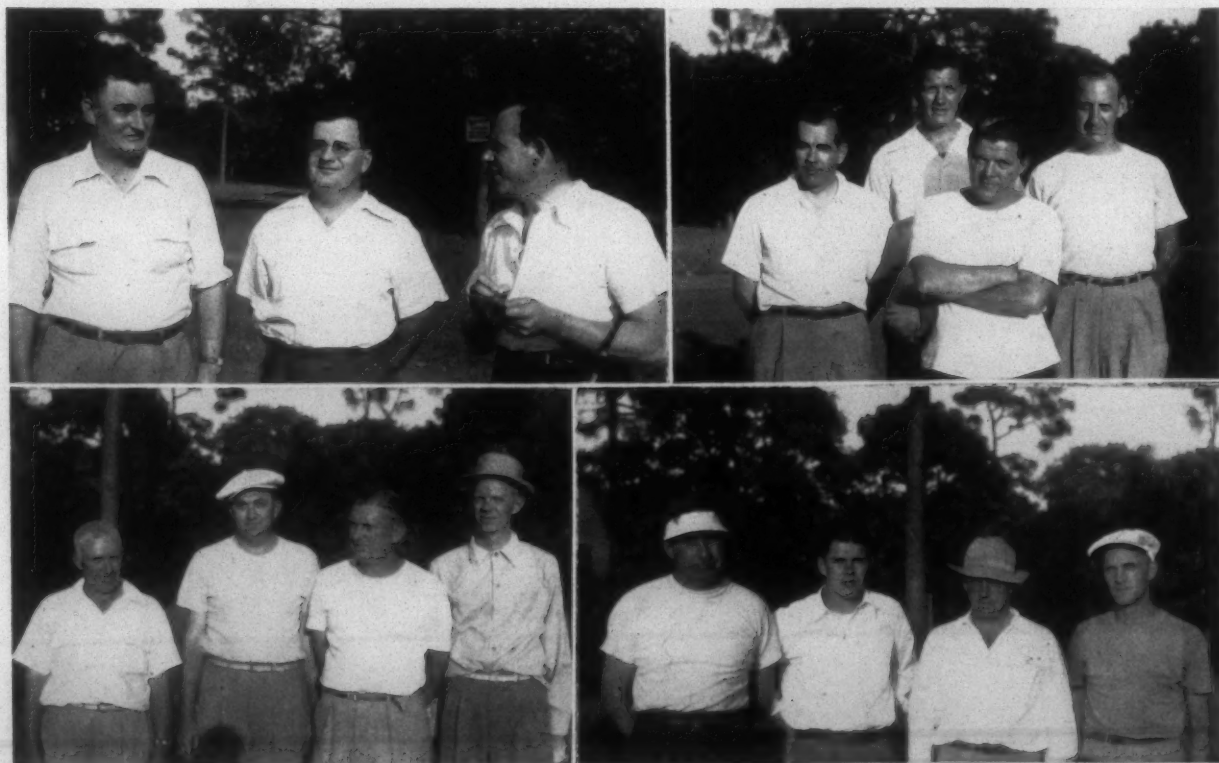
F. Gordon Cobb conceived the idea of securing, through questionnaires, the opinions of superintendents and overseers on practical subjects. He gave unselfishly of his time in compiling the answers to the questionnaires and giving the composite results to the organization. Marshall Dilling was the originator of the divisional and sectional meetings at which discussions on practical subjects were developed and has been carried on through these years.

The South's textile mills owe much to the Southern Textile Association, and many an idea developed at some meeting of the organization has resulted in money saved, better operations and more satisfied workmen.

The Southern Textile Association meeting at Myrtle Beach is the time for speeches and our program here was well planned and rounded into four entirely different subjects. This annual meeting is two-fold—social, and election of officers and attending to necessary business.

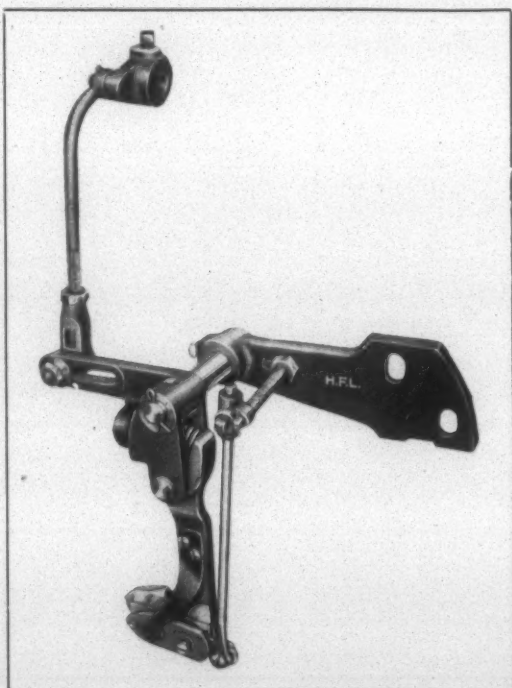
My next recommendation is one that is not new; it has been hanging fire for several years—definite steps should be taken to hire a full-time secretary. Our association is getting bigger and better and we need more full-time supervision and advice. Our divisional chairmen, the association president and the associate members division chairman, all drop out after one year of service in their offices, therefore, a full-time secretary would have plenty to do, keeping everything in line and assisting the new respective officers. This recommendation is no reflection on our present part-time secretary-treasurer. He does the best possible, no reflection upon him, because it takes a good one to put up with so many bosses and a new president every year. Everybody knows that only part of his time can be devoted to the Southern Textile Association.

My next recommendation is one that is not new, because



Four of the golf tournament groups. Top left, C. W. Gunter, R. G. Spratt and Leon Jones; top right, A. W. LaGrone, A. E. Johnston, Jr., John Reed and W. M. Allison; bottom left, W. F. Lancaster, George O. Porter, Webb Layton and J. A. Chapman, Jr.; bottom right, Bill Dobson, Charles Ibach, Jr., G. H. Dunlap and Lee Pickens.

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I have suggested it before. If we cannot have a full-time secretary, then I say we need full-time or continuous election in office of secretaries for each division, possibly some past chairman of the division. This division secretary should receive a compensation for his services and it would be his duty to assist the association secretary in collecting dues, keeping membership records and send out his own division program notices.

Under the article on divisions, Section 4, the constitution says that the secretary may succeed himself. Section 5 says that the division secretary will co-operate with the secretary of S. T. A. So, all that is left now is to pay your division secretary and keep him in office.

We have recommended from time to time several ways of raising enough money to pay a full-time secretary and every time opposition arises. What is wrong? Why cannot the Southern Textile Association officers come through with the plan? So, I hope something can be worked out for the best interest of all concerned. The registration fee was set up here at Myrtle Beach this year for the purpose of the convention taking care of its expenses and not have to draw upon the treasury of the association. With fund raising plans like this in mind, a full-time secretary could visit the mills, visit the division program planning meetings, increase our membership, increase our associate members, increase our mill members, and more ads for our "Book of Proceedings." All of this would bring in more funds and the full-time secretary for the association or for each division would pay his own way.

I have enjoyed working with the associate members. Dallas Neese and Junius Smith have been swell and with their great interest, we have gone a long ways in welding the regular members and the associate members closer together. We have done a lot of work together and we are hoping the results have shown up at the convention. Mr. Neese has worked diligently upon the reorganization of the associate members division and its adoption here at this convention. He and Mr. Smith have been present at all of our board of governors' meetings and I hope this policy of having our associate members officers attend the board of governors' meeting will be continued. Dallas and Junius, my hat is off to you for a swell job.

I want to personally express my appreciation to our secretary-treasurer, James T. McAden, Jr., for his patience with me, because I have caused him a lot of extra work, during my administration. But I believe the Southern Textile Association has had a successful year and the efforts have not been in vain. To all the officers, board of governors members and the chairmen of all the divisions, I want to express my appreciation for your patience and help in supporting what we have tried to accomplish this year. Thanks to all and best wishes to the new officers taking over.

William J. Martin

MUCH has been said and written in recent years regarding the necessity for a co-ordinated research program on cotton in order to strengthen cotton's competitive position in relation to other textile raw materials. It is generally recognized that in any research program the greatest benefits are achieved through the co-ordination of many individual efforts rather than by disconnected single approaches to the problem. The United States Department of Agriculture has not overlooked the cotton manufacturing industry in the comprehensive research program which has been developed over a period of more than 20 years. A spinning laboratory was established by the department at Clemson Agricultural College many years ago as part of its cotton research work and later supplemented by another one at Texas A. & M. College, at College Station, Texas. The contributions which have been made by these laboratories over a period of years are fairly well known to the industry but many are not aware of the fact that the work at Clemson is also one aspect of a broader program of research and service being conducted by the cotton branch in co-operation with many other agencies.

The cotton branch has its headquarters in Washington, D. C., and operates through numerous field stations and offices which are strategically located throughout the Cotton Belt. The activities of the Research and Testing Division of the Branch are concentrated in four installations, namely, at Washington, D. C., Clemson College, S. C., Stoneville, Miss., and College Station, Texas. Facilities are provided in these laboratories for studies and tests which are made



Seated at the head table Friday night were, left to right, Marshall Dilling, Mrs. Robert T. Stutts, Mr. Stutts, Mrs. Virgil E. McDowell, Mr. McDowell, Mrs. Smith Crow, Mr. Crow, Dallas Neese and P. G. Wear.

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on seed cotton, ginned lint, and cottonseed; for studies of ginning and packaging; and for spinning tests to determine the final quality of the lint when it is processed into yarn or cloth. There is close co-ordination of the activities of the four sections of the division in order that the work can be carried through the various phases of ginning, packaging, quality analysis of the product, marketing procedures, and cotton manufacturing.

In addition, numerous programs of work in the various fields of cotton research are carried on through co-operation with other agencies of the department and with state agricultural experiment stations throughout the Cotton Belt. Furthermore, close contact is maintained between cotton breeders and the division's laboratories, between cotton merchants and the fiber testing laboratories, and between cotton manufacturers and the spinning laboratories. By this means it is possible to attain very broad coverage of the field, to study individual and over-all problems, and to give wider distribution to the results of the tests performed by the laboratories.

Detailed studies of individual problems are performed on a service testing basis for a nominal fee and the results reported only to the individual concerned. The research and testing division was authorized to perform this service work for the industry by a special Act of Congress in 1941. The fees were prescribed when this work was initiated in order to partially offset the expense to the government in person-

nel and equipment. It was realized that many individuals or average-size companies could not make the expenditures economically for the elaborate equipment necessary to perform all the tests. Since the initiation of this work, increasing use of the division's facilities has been made by the cotton industry, from the breeders through the manufacturers. The fees paid for this service work go directly into the Treasury of the United States.

Although it is not generally realized, many fiber and spinning tests are conducted in the laboratory at Clemson which have a direct bearing on the problems of cotton manufacturers. This laboratory operates in co-operation with the South Carolina Agricultural Experiment Station and with seed breeders in the development of improved cotton varieties. It conducts fiber and spinning tests on many samples for cotton merchants and cotton manufacturers in order to evaluate the final effects which variations in fiber quality or processing techniques may have on yarn manufacturing and on the quality of the resulting manufactured products. A study which was put under way in 1946 indicates the spinning quality of the cotton crop being produced annually. It has now run for two seasons and will be repeated on an expanded scale as an aid in marketing to cotton producers organized for cotton quality improvement and to merchants and manufacturers in locating cottons which they particularly wish to obtain. Co-operating in this study each year are selected cotton improvement groups and cotton gins which are participating in the Smith-Doxey Classification Service. During the 1947 season samples were ana-

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lyzed from 86 areas throughout the Cotton Belt, 11 of which were located in North Carolina, South Carolina and Georgia. A publication covering the results of these tests was issued in the fall of 1947 while the cotton was still in trade channels and proved useful in spotting sources of cotton purchases. The areas used in this study are selected on a basis of production, an attempt being made to represent 10,000 bales or more in each case.

Over a period of years the research and testing division has accumulated one of the most extensive groups of data on cotton in existence. These data cover raw cotton properties and fiber and spinning test results, including end products of yarn and cloth. Analyses of various portions of these data are always in progress and for a number of years have furnished a fundamental background for establishing many of the relationships between the various properties, manufacturing processes, and quality of yarns.

More recently there has been an intensification of all research programs brought about by the passage of Public Law 733, generally known as the Research and Marketing Act of 1946. The cotton research programs are being carried on through the efforts of many agencies, and directly or indirectly are of interest to everyone engaged in any phase of cotton work. A few lines of this work are the fields of cotton breeding, cotton production, insect control, mechanization, seed cotton cleaning and processing of the gins, development of new uses for cotton and cotton products, cotton marketing procedures, and many others. The cotton branch is participating in the intensified cotton programs, with some work already under way and other projects in the planning stage. In particular, one phase of this new work is a project to help give the mills the raw cotton that they want. Currently it is being pursued to determine the relation between raw cotton quality and product quality as it now exists and to indicate opportunities for improvements in procedures.

Briefly, this work project involves the testing of samples secured from co-operating mills, and the running of a sample to produce comparable yarns and fabrics at the laboratory. Representative coverage of the mills is being attempted, within all size groups from a cotton consumption standpoint and to include the outstanding cotton products such as sheeting, print cloth, broadcloth, fine goods, drills, ducks,

and yarns for thread and knitting. At intervals, samples are taken from each bale in a daily mix for raw cotton analysis and for compositing into a ten-pound lot for the laboratory spinning test. Comparable samples of the mill-manufactured yarns and fabrics are taken at the same time for analysis. Waste studies are being made on the basis of mill manufacturing procedures in connection with the qualities of cotton used in the various mixes. The results of these individual tests are strictly confidential and are reported in detail only to the co-operating mill. Releases for general information will give average figures and ranges of results but will not identify any individual mill. The mills are co-operating on this project, and work is currently in progress with 48 series of tests.

When completed it is expected that this work will show the qualities of raw cotton that are best suited for the manufacture of the principal types of cotton products; it will measure the aggregate requirements of the textile industry for cotton of each type, and the adaptability of cotton as grown in various producing areas to specific end use products. Such information will also provide a basis for the guidance of cotton breeders in their development of varieties and will indicate to cotton producers the extent of available markets for various kinds of cotton. Producers will be in a better position to plan their activities with information on what is required and to reduce or eliminate the lag of a year or so which generally occurs as production swings to shortages or to surpluses in the case of certain cottons. Spinners will then be in a better position to plan their operations, knowing fairly well in advance what raw cottons will be available and where they will be produced.

Cotton manufacturers occupy a key position in the chain of cotton production, marketing, and utilization. Hence research developments in these related activities have a direct bearing on their industry. The problems of the industry have been studied for some time and the results obtained have already aided in solving some of them. The research work is being continued and intensified along lines that are of interest to spinners as follows: cotton production, seed processing, ginning and packaging, the handling and marketing of raw cotton and the relationship of cotton fiber properties, manufacturing processes, spinning performance, and quality of end products.

Something New Has Been Added

By HAROLD W. WHITCOMB, Divisional Vice-President, Marshall Field & Co., and

Assistant General Manager, Fieldcrest Mills, Spray, N. C.

WE have a great industry; I think everyone in this room will agree with me on that. It is great not only in size and in the number of people it employs and in the production it turns out, but it is important in our economy. It is a basic industry; it makes products that people have to have and not just things that they would like to have. There is a tremendous amount of capital invested in it, and the industry has made and is making progress all the time. We joke among ourselves and say from time to time that there has been no change in the loom for a 150

years, and that kind of thing. But you men who are close to the industry and to the machinery know that, while perhaps nothing revolutionary has happened, a tremendous amount of progress has been made. Not only has this been true through your lifetime and mine, but especially in the last few years it has been going on. I think, however, we have done, maybe, a perfectly horrible and lousy job in our industry in publicizing what is going on. I think the public has perhaps a wrong idea and thinks our industry is backward and does not realize the improvement in products

and quality, at constantly lowered cost (outside of the present inflationary prices), during the last 25 years. We have been too modest, perhaps, or too busy, to tell the people about it. But there has been a movement in the last few years, to which you have been contributing, to tell the people more favorable things about the textile industry. One of the things to be overcome was that a lot of them thought we had a sweat-shop industry and that we use child labor, and all that sort of thing, which might have been true 50 years ago but is not today. So we have to tell the people about our industry.

There is another and broader point of view. I think all industry has been at fault in this respect. I think we have been too busy to take the time to present a true picture of industry. We were in the dog house for a few years. Then the war gave us a chance to come out of it, and we did. The contribution was so obvious that a great many people began to think that industry was not as bad as it had been painted. But I think in the last two or three years our industry has been losing prestige, as our country has on a national scale, in that we allowed or did not do much to combat the propaganda which labor unions and other organizations of that type put out about the tremendous profits of industry and about how we could give people tremendous wage increases without raising prices and that sort of thing.

That is the chief thing I want to talk about. I think something new has been added to the functions of management, which in my definition includes the foreman, the assistant foreman, the overseer—everyone who has direction of people in their work. I hope I can interest you to the extent that you will want to do something like it yourselves. I think it is extremely important to our companies, to our American life, and to the future generations of young Americans that we do. I am talking about a planned, vigorous, aggressive, and intelligent campaign to educate the American workman, the public in our communities, and our young people in the basic principles of our economic system. I contend and can prove that we have shamefully neglected this vital duty and that today the woeful ignorance of the average man about these simple, basic facts makes him extremely vulnerable to the arguments of every economic crackpot, of every demagogic politician, and, most important of all, to the clever, lying propaganda of subversive minority groups whose real objective is the des-

truction of our democracy in order to prepare the way for the subjection of our people by the totalitarian foreign power they represent.

I assume you agree with me that under this system of ours—call it capitalism, free enterprise, the American way of life, democracy, whatever you like—we have developed, in a remarkably short period of time, the greatest, wealthiest, most powerful nation in history when measured by any material standard you wish to apply and that in doing so we have also provided the individual with a greater amount of personal liberty, freedom and opportunity than any other system the world has ever known. And, conversely, I assume you agree with me that any other system of political and economic philosophy now existent in our modern world tends to restrict the individual, limits his freedom of choice and action, denies opportunity to all except the political bureaucracy, and eventually leads to a lowered productivity and a lower standard of living for the majority. You and I take these truths for granted, just as we acknowledge—to ourselves—that God is kind and merciful, that our lives are faithful and virtuous, that a rose is fragrant and beautiful. I think most of us have assumed that it would be in poor taste and indelicate to talk about or defend these economic principles any more than we would expound our belief in these more personal principles I have mentioned.

I say we must speak up now and sell, sell, sell this system of ours or we stand to lose our economic and political heritage. We have the greatest product of all time, but we are not working at the job of selling it. There are other groups, clever, smart, and well organized, working full-time to tear down the average man's belief in America. All right you say to me, so what? These are in the minority. Look at all the conservative, orthodox information available all over the country. I say to you, analyze what your workers are reading on these subjects. You will find the propaganda I have been talking about is dominant. Further, it constantly undermines our free press by referring to it as the voice of "special interests," of "Wall Street," which has been built up as a terrible ogre whose principal objective is to keep the working man in perpetual servitude. These labor papers tell the worker that all of our leading newspapers and magazines are dominated by the N. A. M. and the industrialists upon whose advertising their livelihood depends. They hear and read this over and over, until many of them believe or at least have an honest doubt in their minds. Hitler proved this theory that if you tell a lie often and cleverly enough a whole nation will believe it. My point is: We are doing nothing to counteract this kind of propaganda.

I presume most of you are familiar with the marvelous job the Opinion Research Corp., the Gallup and Roper polls, Psychological Corp., National Opinion Research Center and others are doing in surveying the attitude of various groups of workers and the public on different phases of our economic structure. If not, I recommend that you become familiar with their work. Here are some results from recent surveys.

Millions of citizens confuse "profits" with mark-up, investment, net worth and sales. They guess that industry makes from 30 to 50 per cent net profit. They think ten per cent on sales would be a "fair profit." As you know, over a period of 16 recent years American business made



A group from Rosemary Mfg. Co. poses with J. Melville Broughton, one of the featured speakers during the Southern Textile Association convention. Left to right: W. D. Connell, Virgil E. McDowell, Mrs. McDowell, B. F. Ryals, J. E. Shaw, J. E. McGee and Mr. Broughton.



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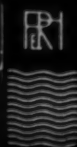
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a net profit of 5.9 per cent on net worth and 2.9 per cent on net sales, but one out of every three adults believes that "business has been making too much profit."

A recent Gallup Poll showed that only three in every ten persons can give a reasonably correct definition of free enterprise. One-third of the American public has no conception of what the word "tariff" means. There are 34,000 competing companies in the oil business. A recent survey by the American Petroleum Institute shows that 28,000,000 people think of the oil industry as a monopoly. Opinion Research Corp. made this test. "A company's sales were \$310,000,000 and net profit \$18,000,000." Eighty-six per cent of the American public say: "The profit is unreasonable." But say: "Sales \$310,000,000, profit six per cent;" and 69 per cent of the public will say: "That's reasonable." Fifty per cent of the public do not believe management's statements. The annual statement of one of the largest and best known corporations in the country was shown, and 50 per cent of the public said: "You can't trust the figures." Management understandably, largely for competitive reasons, refuses to open up its books to labor-union auditors. The labor leaders and labor press say: "They are covering up; they are hiding the true facts." The survey shows whom the public believes. "Do most companies tell the truth about their profits?" Only two out of five Americans think they do. Many companies make their profit figures available to their workers, but surveys show that most of the whole profits story has flopped miserably. Why? I believe the real reason is because we have not taught them any of the simple, basic facts of economics. We are trying to teach them calculus before they can add and subtract!

What are we going to do about it? Much constructive work is being done in our country by the various management and trade associations, by The Foundation for Economic Education, Inc., and so on. But I hold that this information does not get to the average man. He will not read it, and if he does he will not believe it. It makes excellent source material for you and me, however.

I believe the answer is that each of us, in our plants, in our communities, each in our own little area, must go to work on this job. And where can it be done better than right in your place in management, whatever that may be? In your induction programs, in your plant paper, in your training of supervisors, in scheduling speakers for various meetings within your organization and in your local service clubs, in your grievance hearings with your union committee, in your personal talks with employees, over and over again you have the best opportunity I know of to teach, explain, and sell this America of ours. Keep after your top people in management; bring them out of their shells. Tell the company story—all about its employee benefits, its earnings, what you are doing in research, how your policies fit into the American scheme of things. Convince your workers that the company's goals and theirs are basically the same.

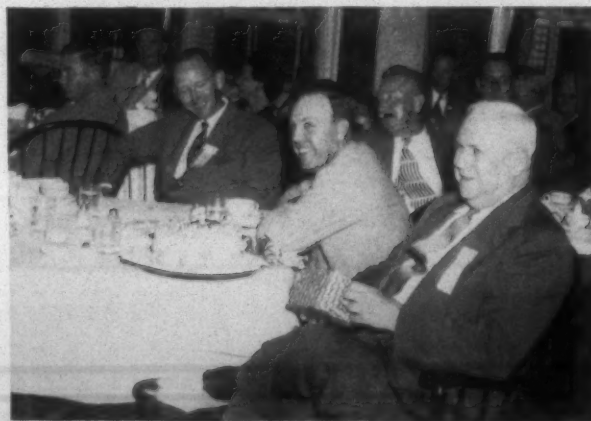
Take your local preachers and school teachers into your confidence. Surveys show that the big majority of these groups are definitely right of center. But most of them are ignorant of basic economic truths. Take them through your plants; give them some facts and figures—they have more influence in your communities than you realize. Do you

know what your local high-school social science teachers are teaching the boys and girls of your town about our industrial system? (These youths will be your employees within a few years.) Why don't you find out? Then why not help the teacher to tell them the truth? Give her some ammunition and maybe arrange for yourself or some of your key men to take the class through your plant, ending up with a 15-minute talk in your office or the general manager's office when the tour ends.

I am going to touch on a rather delicate point. I have noticed in our own organization that there is sometimes conflict between the young, college-trained men and the older men who have the practical knowledge but not college training. Sometimes it is thought that the man who has not been to college is handicapped. In my own observation that is not true. From my observation the man without a college education who is willing to put in the time and study to broaden himself is not handicapped at all in that job. In my own organization, for instance, we have six mill managers. Three are college men; three are not. I have noticed, however, that the non-college men who are willing to take advantage of the training courses which we provide and of all the other types of educational advantages that any man can get hold of when he is willing to do it fill their places and do a swell job.

I mention that for this reason. I think today that all of us in management—and that includes every one of us—must know more than the technical details of operating machinery. We must know more than the personnel policies of our own company if we are to do the kind of job I have been talking about this morning. To sell our own companies and our American system to our workers we have to know something about these basic economic truths that the public has to be taught. If the public is not taught these basic economic truths it will bring about some kind of change. So we have been urging our men—I would not be so presumptuous as to urge you as a group, but we have urged our men to read the material which we provide and to attend some of the classes that we have been conducting for them; and the amount of progress that our group has made in the last two or three years I think is very encouraging.

There is an interesting thing I might mention. About a year ago we put 75 or a hundred books in our local library—maybe a couple of hundred dollars' worth of books, on



David Clark, editor of *TEXTILE BULLETIN*, celebrated his birthday during the Friday night banquet. With him are Dave Purcell (left) of Fieldcrest Mills and Ray Marley (center) of Erwin Cotton Mills Co.

subjects in which we thought our men would be interested. There were not too many technical books; most of them were on general management subjects, economic subjects, and so on. A few weeks ago I asked to have a list from the library of who had taken out those books. I was interested in knowing how many of our employees and what type of employees had taken advantage of them. (I may say that list went in the waste basket when I had finished with it.) It was interesting to me to see that many of our young men had used those books and to see that a number of these young men had gone ahead, had been promoted. They were not promoted because they had read the books but because they had demonstrated to those above them that they were good men. So I think if we can bring that about, if we can

get those under us to understand the policy of the management, it bounces back to us.

This is a big job. It requires study, planning, careful preparation, and a continuing interest. It is a long-range and a long-time program. It can not be conducted as a propaganda campaign. It must be a sound, basic, educational campaign. It is worth doing. I say you are the logical men to spark-plug the movement, each in his own area. "Something new has been added" to the wonderful opportunities you fellows already have to make your contribution to this American life of ours, which in spite of its faults is by far the best on earth.

Mr. Whitcomb's remarks were made April 17 before the meeting of the Northern North Carolina-Virginia Division, Southern Textile Association, in Hilton Hall, Danville, Va., where those present were guests of Dan River Mills, Inc.

Fitting Human Relations To Your Mill

By F. E. BOZEMAN, Jr., Superintendent of Maintenance, Dan River Mills, Inc., Danville, Va.

I FEEL quite sure that most of you are more or less familiar with the organization of the maintenance department at Dan River Mills. You have heard of it in previous meetings, and several articles in various trade journals have explained in detail the entire program.

As textile machinery is built today, I honestly feel that we are not lacking in any technical knowledge that will prevent our machinery from operating at its peak efficiency. We have the mechanical experience and the know-how. The problem we now have, and for some time to come, is to find some method by which we can put all this knowledge to work. To develop ourselves so that we can lead our people along the road to individual improvement, and to instill in them the desire to do a better job.

Yes, we have been scientific enough, philosophical enough; we have even been clever enough. But, what man would like to affirm that in our human relations we have been practical. It is this practical human relationship which is the present program in the maintenance department at Dan River. I do not mean the morbid, sentimental, mushy type of human relations; I mean the red-blooded type—a slap on the back, a good belly laugh, a kindly smile and a wholesome feeling for our fellow man.

We hear a lot of atomic energy—that the stored up energy is a power of destruction. However, I do not believe that it is half as destructive to the prosperity and future welfare of America as is the human energy and brain power lying around doing nothing today.

It is my firm conviction that the American foreman of today has the greatest responsibility ever placed upon one group of men. A foreman's actions are interpreted by his people as being the policy of the company. To most of them, he is the company; and if he is of the type that does not educate himself in the fundamentals of good human relations, then he is tearing down all the sound policies and good principles that have been set up by intelligent management.

To be able to understand the use of good human relations, a foreman must realize that there are seven basic human emotions: fear, anger, disgust, dejection, wonder, elation, affection. Of these seven, there are only two that can be

used to lift people—to give them the desire to forge ahead, to do the job.

One of our foremen wakes up feeling out of sorts; and immediately upon arrival at the mill, calls Joe away from his machine and tells him he's lousy, threatens to fire him, and gives him the very devil. Immediately Joe's *fear* is aroused. He knows, or thinks he knows, there are just so many jobs. All workmen are aware of that and they start thinking "What's going to happen to me?"

Pretty soon Joe remembers that he has been held up on materials and dozens of other things that kept him from doing his best. So, he gets *mad*, "Who does that darn foreman think he is?" As his anger cools, he thinks of some more features the boss has overlooked. "I wish he had to keep this old wreck of a machine running." As soon as he starts hunting for things from that angle, he becomes *disgusted* with foreman, job, mill and all. Not exactly the best way to get Joe's best efforts, is it?

There's still enough fear left to make Joe think maybe he'd better speed up a bit and make a better showing. Then, he remembers that union rules put a limit on what he can produce in an hour. He's licked going and coming. What chance has a man got? Now he's thoroughly *dejected*. So, he goes home, sits in his easy chair and lights his pipe as usual. But, somehow, he can't read. His children sense something is wrong so they keep out of the way. His wife catches it, too, and goes to bed early. Joe soon goes, but he can't sleep. He tosses all night. *Wonder* where I can get another job? Wonder what I'll do about that note? Wonder what we'll do about Junior's teeth? Oh, God, I wonder!

So, we've set in motion all the destructive emotions. And see how easy it was to do it? Well, it is just as easy in reverse. Next morning it's a beautiful day. The superintendent comes through, goes over to Joe, slaps him on the back, asks him about the wife and kids, compliments Joe on his work, tells him the foreman was bragging on him last week, smiles and moves on. Just as small a thing as that does it. Joe remembers how the foreman lent him five last month. He sees the other guys around him, teammates on the same job; and he feels that red-blooded, he-man affection for the fellows he knows so well. It's a swell place

to work. The two plus emotions have been set in motion. Which way will produce the best and most work?

If we are going to play on the heart strings of men, let's play on the two that will do some good. If we fool around with the other five, it's a big question as to what the outcome will be. The American foreman of today can and must be one of the bulwarks of Americanism. It is he who can nourish the seeds of loyalty to mill and country, and by so doing, play a large part in keeping America American.

Our founding fathers built a nation out of 46 nationalities who *have* lived in peace and understanding. Shall we, in management, and they, in labor, let it fail because of a misunderstanding? We must impress upon our co-workers that we are all here for the same purpose. We are all employees working for our investors and the public. We are working for each other; we have common interests. We are, also, investors either directly or indirectly; and more important, we are investors in America because we are all Americans.

You remember the story of Alice in Wonderland, where Alice and the Queen came to the tunnel of the winds; and the Queen told Alice, "It takes all the running you can do to stay in the same place." That is about the position we find ourselves today, a tunnel of world-wide winds that threaten to blow us away from the system that has worked so enviably for so long a period of time—winds that tear us apart, employee from employer. We are people with the same objectives, quarreling with each other because of breaches. We apparently don't understand why and what it is we are working for.

There is a beautiful story, the story of the islands of the Archipeligo. Each little island was so proud of itself as it looked out over the waters to the other islands, and on to the continent. Through the mist over the waters each island could dimly see the great mountain. One day the waters dried up, and to its amazement, each island discovered that there was hard firm soil between it and every other island and each was a part of each other. Looking a bit further, they discovered that the hard firm soil went right to the continent; each was a part of each other and a part of the continent, and now they discovered that the hard firm soil went right to the mountain itself and they were a part of that.

Labor and management are a part of each other, dependent upon each doing its best job to insure employment for all. We do not hide the fact that it's management's responsibility to make a profit by employing every honorable, legal and ethical means. And if that profit is not made, then the plant will cease operating, to the detriment of the individuals and the community. It is made known that it is incumbent upon each supervisor to carry out the sound policies of top management.

Each supervisor in our maintenance department is charged with the responsibility of steering his department on a straight course of common understanding between him and his people. Too many supervisors pass their people day after day, hour after hour, and almost moment after moment; and though they rub shoulders together, there is a chasm between them. Many of them artificial, dug out by false impressions, and they are so easily bridged. As long as they exist, they prevent the creation of good human relations between the

foreman and his men. We believe that our supervisors are bridging those chasms.

If we can get our people to say that they work in the best department under the best foreman, in the best mill under the best management and in the greatest country in the world, then that is the final goal and we have accomplished something worthwhile.

Our supervisors are training themselves to handle men. We are trying to return to the period when a man took personal pride in a job well done. Back to the fundamental American idea of each man standing upon his own record and ability. Back to the old teachings that a man's security was built by his own initiative and not by government edict. We are trying to counteract the malicious propaganda being spread in this country against the very keystones of freedom.

You cannot take a large part of the citizens in any one country as we did back in the 30s, and by means of money grants and donations, let them live without contributing anything to society and expect them in a relative short period of time get back to the stage of thinking "I ought to be at work, doing a good day's work for my money." There has been generated in the minds of some people the idea that they will get as much as they can for nothing. It's an educational process we must carry on to get them to feel that they must give their best to their jobs.

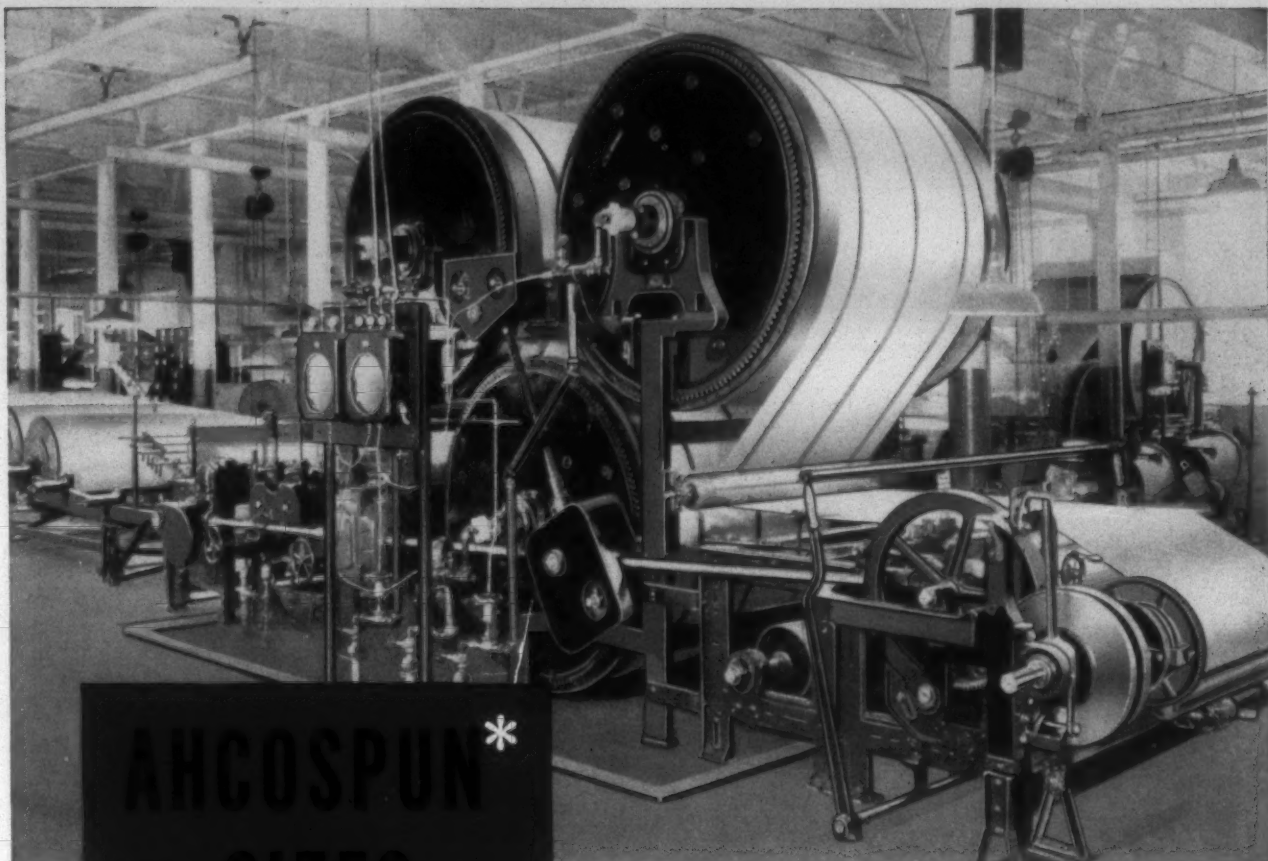
I believe that it was Plutarch who wrote "The real destroyer of the liberty of any people is he who spreads among them bounties, donations and largesses." History teaches us that nations fall from internal weakness, rarely from external attack.

When God created the oyster, He guaranteed him permanent security. He has a house that is practically indestructible; he does not have to work to obtain the necessities of life. Whenever he needs to feed, he merely opens his shell, and the food flows in. He is almost immune to enemies; he has no worries or responsibilities. However, when God created the eagle, He guaranteed him nothing. Everything he obtains is derived from his own endeavors. He builds his own home on the highest mountain peaks where it is subjected to heat, cold and storms. He is forced to fly hundreds of miles per day in search of food for himself and family. He reaps the rewards of his labors. He is proud, he is the lord of all he surveys. The eagle, and not the oyster, is the emblem of America.

In our department the overseers and second hands spend hours upon hours of their own time teaching those people who desire to better themselves the ways and means of improving their jobs. Our personnel is urged to attend these training classes, and prepare themselves so that they will not have to depend upon anything else except their own talents for their security. It is impossible to obtain good job performance by men who do not possess the knowledge to think through various problems that arise.

It is well known in our department that when a promotion is available, the man who has done the best job is given the opportunity to rise one more step on the ladder of success. When a man leaves our department for a better job elsewhere, someone inside is given that chance to take his place. We are making it possible for ambition to reap its reward.

On the channel coast of France, there is a province called Brittany. The people derive their chief income from fishing the sea. They are a very devout and hard working people. Before each little boat heads to the open sea for its long



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trip, the entire crew stands on the shore, and with bowed heads repeat this simple prayer: "Oh God, Thy sea is so big and our boats are so small." The sea of human relations is so wide and deep, and our knowledge of it so small. We are attempting to build our boat of knowledge strong enough to be able to sail far out on the sea of human relations and gather unto ourselves the faith and good will of our people.

In closing, I think it appropriate to call to mind next to the last verse of that great poem, "The Red Pony," where the old grandfather out on the Pacific coast is talking to his little grandson, Joey. He was telling him of the great trek westward; how they crossed the mountains, rivers, plains, plateaus and deserts, pace by pace—fought Indians, lived through massacres, starved and famished.

"We were always a Westering, Joey; it was in our souls;

it was big as God himself. It lived as a part of us, and then we came to the sea, and the tragedy of it—Westering died out of our hearts, and Westering was no longer a hunger in our souls."

It seems that old-fashioned Americanism has also come to the sea. The pioneer spirit has nearly flickered out; but if we will strive to chart correctly, the sea of misunderstanding that exist among Americans today, dry up the waters by better relations between labor and management, we will discover the hard firm soil that connects us. We will be able to fan the flame that made America great, put the look of eagles in our people's eyes.

Working together for the common good, forgetting that we can't get something for nothing—that is our program. To fail will establish only this fact that our determination to succeed was not strong enough.

Mr. Bozeman delivered his address to the Northern North Carolina-Virginia Division, S. T. A.

Selling The Textile Industry To The Public

By SMITH CROW, General Superintendent, Erlanger Mills, Inc., Lexington, N. C.

I HAVE been asked to talk on the subject of selling the textile industry to the public. To me it seems somewhat strange, if not really amazing, that we should be asked or should find it necessary to attempt to sell our industry to the public after these many years of its existence. We should like to think that the textile industry is so well known by this time and that people in general are so familiar with the tremendous progress that has been made up to this stage that it would not be necessary to have to try to sell it to the public. But it does seem to be necessary, and I wonder if the reason can be this—that there is a misconception or a wrong conception on the part of the general public of what the textile industry really is today, and if that conception might be lingering or might be in their minds because of things that existed in the early days and early years of the industry, particularly in the South, and the handing down of that conception from generation to generation, so that those who have never had the opportunity of being sufficiently close to the textile industry really to know these things still have somewhat the wrong conception of what it is. You and I and all others who really know what this great industry is today can throw out our chests and hold up our heads with pride because it is our industry.

It is hardly necessary for me to tell you that the textile industry ranks third among all industries in the United States. Only the steel and the automotive industries come ahead of it. It employs about a half million people; I believe, to be more exact, there are about 475,000 workers in our textile industry.

Let's endeavor to analyze the situation that perhaps makes it necessary that we sell the textile industry to the public. In this country the industry began back in the early days, first coming into being in 1790, when the first mill was started. So it was 158 years ago that the first successful cotton mill in America was put into operation. It was a very small unit in Rhode Island. From there, other small units

began to be established. In 1810, 20 years later, there were 102 small units, with a total of 31,000 spinning spindles in operation at that time. Twenty years after that there were 795 mills, with a total of 1,250,000 spindles and 33,000 looms. Now, I am not going to take it decade by decade and come all the way up to the present; I merely wanted to give you some of the early history of the beginning of our great industry in this great country of ours. On and on it grew until it reached in 1924 the maximum number of spindles in operation in this country, which was 36,000,000 spindles.

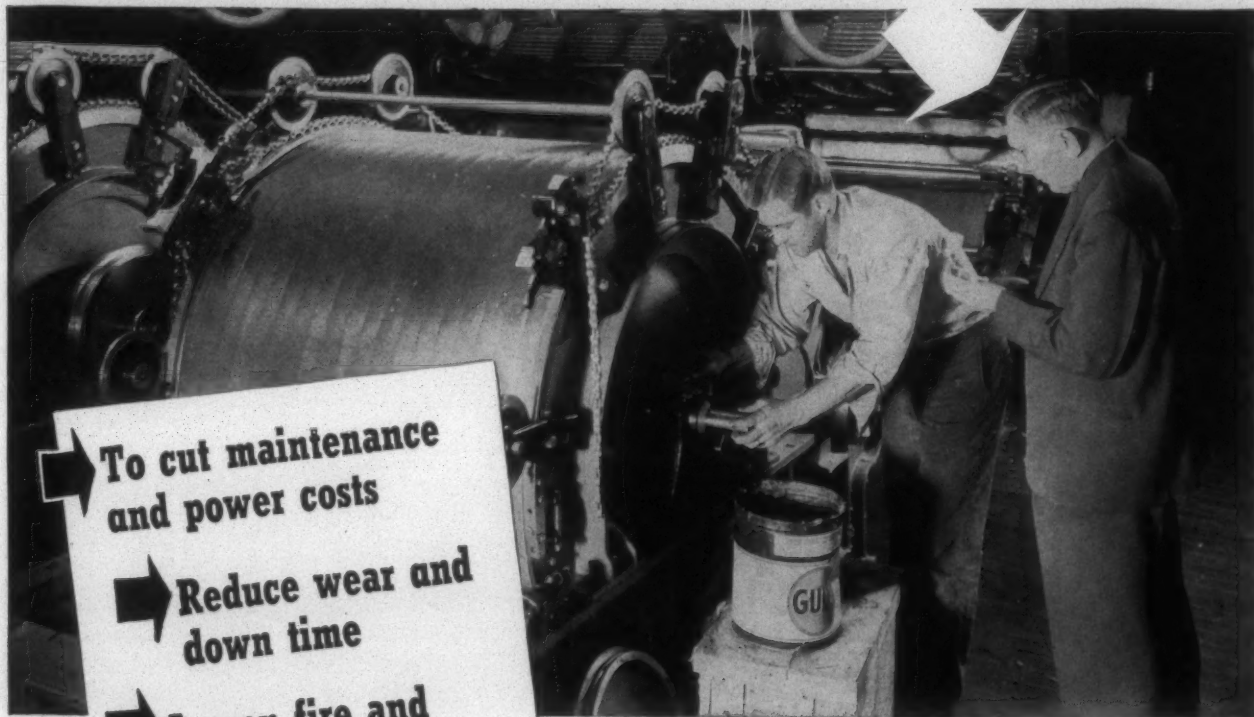
I should like to speak more especially of the textile industry in the South, of which we are so proud today, despite the groaning and mourning of our New England friends. Today 77 per cent of all of the textile industry in America belongs and is located in the South, even though it had its birth in New England. For many, many years the South had to look to New England for leadership in textile manufacturing. That is no longer true today.

Not only did we have to look to New England for leadership in the early days of the South's textile industry, but for many years after the textile industry had its birth and its beginning in the South the public had to look to New England for better and finer woven fabrics; and what New England could not supply the people of this country for many years—for a long, long while—had to go to England to get, especially in the way of better broadcloths, etc. But that is not true any longer. The South can give to the people, from her textile industry today, anything that any textile industry anywhere in the world—not only in America—can offer. The industry in the South has grown until now, today, we have in our own Southland, with all of her natural resources and with the best people in all of the world, 77 per cent of all the textile industry in America.

Let's go back for a moment to the early days of the textile industry in the South. Perhaps what I shall say is true also—certainly so far as I know it is true or was true in

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New England when they had their beginning up there. We want to make some comparison with our present day and see why the general public might have the wrong conception and why it is still necessary for us to do a selling job for our industry. In making this comparison we want to consider briefly what some of the thoughts used to be and why there were such thoughts in the minds of many people. I can remember some of the erroneous ideas people had, even in my young days, of what a textile mill was. Many people thought of it as a building full of machinery of various types and kinds and all very dangerous and hazardous. That was one of the conceptions they had. They also had the conception that, because in a mill so many people were so closely gathered together and worked inside walls, where they did not get sufficient air and sunshine, it was a place that caused injury to the workers' health and brought about dreadful diseases.

In the early days textile mills did not have the kind of machinery we have today. They did not have the automatic loom but had, back then, what was known as the hand-threading loom. I can recall, and I expect some of you in this room can recall, when we did not even have an eye in the shuttle which could be filled by hand but had to place the filling thread in a certain position and suck it through an eye to thread the shuttle. Compare that with the loom we have today, which never stops for filling a bobbin or a shuttle and which runs at a high rate of speed.

Back in the early days of the textile industry the mills were not equipped as the modern mills are. No one would attempt to say they were. They did not even have drinking water in the plants. I can recall when we had to have boys to tote water—to go outside to a well or pump to get water and then carry it into the mill. In most cases all the employees of any one department drank from one bucket of water, with the same dipper. That has not been true, of course, for a great many years. But I wonder if stories of some of these things that did exist in the early days of the textile industry in the South have not been handed down and if some of those things do not still exist in the minds of some of the people and make it necessary, even today, to attempt to sell our great industry to the general public.

Back then, too, we had long hours; and, as in all other work, the wages were low. I do not think the textile industry in itself was an exception to the rule along that line. We had poor equipment for the cleaning of the stock as it went through the various processes at that time, and that did not make the work as pleasant for the worker then as it is today. We did not know very much about a good health program at that time. The doctors, the medical profession as a whole, did not know then how to control disease as they do today. Perhaps many of you, along with myself, can recall that back in the early days in many mill villages we would have had epidemics of smallpox because vaccination was not properly followed up, due to the lack of good health programs such as we have today. We can also recall how typhoid fever at one time was prevalent, not only in the mill villages but generally. Today we do not have very much of that kind of disease.

We want to think for just a few minutes how we might eradicate or remove any thoughts along that line that might still be lingering in the public's mind. The topic of my

talk is selling the textile industry to the public. If there is a seller he must have something to sell, and if he has something to sell he must have a buyer if he sells. In this case we have the thing to be sold—the textile industry. We have the buyer—the general public. Who is the seller, and how is the seller going about the job of selling to the general public? To do the best job of selling that we can, as sellers, we have to know as much as possible about what we are going to sell. Mr. Whitcomb has already made mention, in a rather general way, of selling the textile industry to the public. There are many ways in which we can do it. We can sell our industry through our schools, our high schools, through our churches, through our athletic programs and inter-community activities, through public addresses before the high school graduating classes, particularly, and also before civic organizations—addresses by personnel managers and other members of the management staffs of the various textile plants throughout our country.

I should like for us to think about just for a moment and thresh out in our minds what it is we are going to offer the general public. You and I represent an industry that, next to food itself, means perhaps more to every human being on earth than anything else, because it clothes humanity. We are carrying out one of the commands of the Great Master Teacher of all teachers, to clothe the people. From the time the new-born babe comes into the world until the man is laid to rest for his final sleep the textile industry touches that individual. The first thing that touches a new-born babe, aside from the hands of the physician and the nurse, is the cloth that bathes it—made in a textile plant somewhere—and the garment that is placed on it—made in a textile plant somewhere. That individual is clothed, then, throughout the span of his life. Not only does the textile industry do that for the clothing of humanity, but it contributes in many and various and sundry other ways. We are told that it would be impossible for you and me to ride with the safety that we do today in our automobiles if every tire on our car did not have an inner lining made in a textile plant. The tire cords that are in every tire are made in some textile plant either from cotton or from high-tenacity synthetic yarn. The upholstery in our automobiles is made in some textile plant. No matter what a person may do or where he goes or where he lives he has daily contact with the great textile industry, through its products. Every member of every family, as I have just stated, uses textiles in dozens and dozens of forms. I recall that during the war it was stated that there were more than 11,000 different items used in the various branches of our armed forces—more than 11,000 items made in textile mills.

In what place, then, can we put the industry? I think I have already made that fairly clear—that it ranks third among all industries in our country and that in the South we have 77 per cent of all the textile industry in the country.

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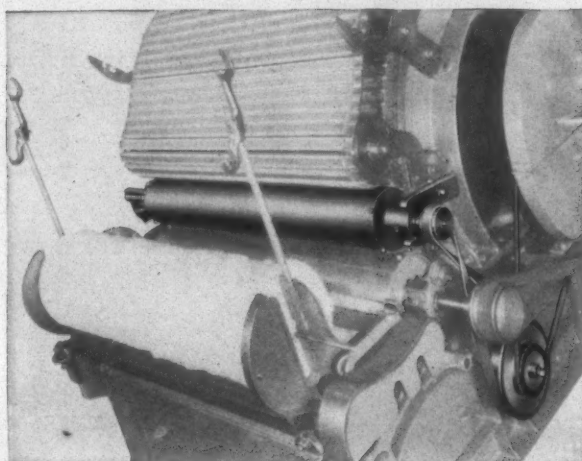
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factured products increased five times. In more recent years the trend has been even more apparent. The South needs money to put it on an equal footing with the rest of the country; and the time is almost at hand, it seems, when we can attain that equality. The cotton mills of the textile industry present the most amazing growth of industrialism in the South. There is no question about that, that the textile industry is a live industry in our country. We are on an upward climb of a beaten nation within a nation. I say that because of this fact. To my mind—and I believe I can say this without fear or successful contradiction—to my mind the textile industry in the South, particularly, is just now in reality beginning to emerge and come out of the Reconstruction days following the Civil War. Therefore I say that we are on an upward climb of a nation within a nation, in the real beginning or awakening of a modern Southern industry that leads in providing social and other benefits for its employees, an industry whose executives and employees have been community-minded, an industry which almost from the beginning has been the largest provider of jobs and, the biggest taxpayer of the textile South.

Your job and my job is to put these things before the general public and to remove any wrong impression and conception that they might have of what the great textile industry today really is. That can best be done, in my

opinion (which I will try to state in just a few words), first of all by having each and every worker in your plant and my plant believe in the textile industry to such an extent and degree and believing in you as his immediate supervisor and as the one who directs his work that as the workers go out into the community and on the streets in the cities, in the schools or wherever they go, they will be your best sellers. Then the personnel managers of our various plants can do a tremendous job in selling the textile industry to the people. If you will pardon a personal reference to our own plant, our personnel manager a short time back, for this very purpose and reason, and not knowing that I would be called upon to make this talk, visited by fixed appointments five different high schools in the vicinity of our mill and talked to the graduating classes about what the textile industry is. Our boys and girls in the textile plant villages meet and mingle and mix with the boys and girls from the country and city communities today, perhaps more so than ever before in our history. If they believe in the textile industry as you and I do, and if you and I do the proper job in selling our people who work for us and with us, in bringing them to a proper realization of what the textile industry in the South really is, I think we shall not have then a big problem in selling the public completely on the textile industry.

Mr. Crow was one of the speakers during the recent meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association.

Opening, Picking, Carding & Spinning

Predetermining The Spinning Characteristics Of Cotton

By PROF. JOHN F. BOGDAN, North Carolina State College School of Textiles, Raleigh

IT has been not too many years back in the history of textiles when the fibers of commerce were exported from comparatively few ports and were grown as they had been grown for generations. Life was fairly simple for the spinner in those days. He had come to know the various—American Sea Island and Upland, Egyptian Uppers, Rough Peruvian, and Bengals. Long experience had told each spinner what type suited his particular needs, and he learned to recognize these types and the differences between the good and the bad samples, even when those differences were small. He knew them as a man knows his friends, not by measurement but by recognition of identity from the whole complex of character. Similarly, he recognized whether they were true to character, off color, lighter in body, and so on. An Egyptian spinner was lost when it came to dealing with American cottons or Rough Peruvian or East Indian, and he did not know a merino wool from a bar of soap. So there developed a considerable body of knowledge about cottons.

The cotton classers took over this knowledge and began to specialize in the collection and distribution of the familiar types. They studied the characteristics and began to learn to identify the various types with which they were

dealing. Though each still operated in a narrow range, it became necessary to make comparisons between alternate types and to make comparable appraisals, in the field and in the mill, from China to Peru. Here, again, classification was based on a man's opinion rather than on evidence; but an expert becomes very familiar with the fibers with which he is dealing every day, and his judgment is to be considered and carries a good deal of weight. The need for common, quantitative scales was recognized, however; and standards were instituted, of common staple and grade, wool quality or fineness, and shrinkage or yield. Classers submitted more or less to this discipline to obtain agreed appraisals, sometimes against their better judgment. Experts are very sensitive to the quality of similar materials and know there is much more in it than these few simple, standardized features. They still recognize the types and their character.

Then along came the cotton breeders, with that birds and bees business. They took varieties that had grown for generations by the Nile and sowed them in Arizona. They brought plants from Mexico to North Carolina, and with them the boll weevil, which devoured to extinction the slow-maturing stapled cottons of the Southern United

States. They began to cross and crisscross the different varieties, in such a way that progress was too rapid. It was so fast that one had to rely more completely on measurements, because the varieties changed before a man got to know them; something else came along which was better, and he switched to that.

As the number of varieties increased it became necessary to get some sort of quantitative tests rather than the opinions of the classers, which do differ. Laboratory tests were developed for fineness, for distribution, and for length. These lab tests tell us things that we can not get from the classer, and vice versa, and are valuable when you are trying to determine the features to choose, breed for, or achieve by treatment in the improvement of varieties. At the same time, they are not putting the cotton classer out of business because if we should try to buy cotton on the basis of laboratory tests the price would be up two cents before we got our results and decided that was it. So it is up to the cotton classer to make the decision.

But when all is said and done, the decision as to the variety of cotton is up to the spinner, and not to the classer or the lab. It is the spinner's judgment that makes or breaks a variety. The cotton may look as pretty as a blond, but unless it is to be used to stuff a mattress what you men want to know is how much you have to fight it to get it into a yarn. It is the character of the yarn that is the most influential feature of a fabric. For these reasons cottons are being selected on the basis of spinning tests, performed either by the individual concerns or by the government agencies.

As you probably all know, the government spinning test, as it is now, is concerned only with the skein strength of a warp twist yarn; it uses that as the basis of its measure of cotton quality. Of any one measure it is probably the best, but it does not tell the whole story. Often the quality needed is not the highest warp strength. There are other factors in which certain mills are interested. A good broadcloth warp, for instance, should be soft and lustrous, of high regularity; if you are making broadcloth you are looking for those qualities as much as for strength. Hosiery yarn, too, needs these same qualities. So the warp strength does not tell the whole story.

If the strength of a warp twist yarn is not enough to tell us what we want to know about a cotton, what is? In the spinning test how can we best describe the characteristics of a fiber or of a variety? Take a piece of yarn and break it. What determined the force necessary to break it? I think you men probably can give me the answer. The first thing that contributed to the strength of that yarn is the strength of the fiber. As we all know, if we use a strong fibered cotton the strength of our yarn is going to be high; if we make yarn out of broom sticks and orange skins the strength is going to be low.

The second factor which contributes to the strength of the yarn is fiber cohesion—the way the fibers cling together. They are made to cling together by the use of twist. As we know, within limits as we increase the twist in the yarn the strength increases. When we reach the maximum the strength declines, and the reason for that decline I will try to give later.

The third thing which contributes to the strength is the

evenness or regularity of the yarn. The yarn is going to break in the weakest place. You men know that if you are having trouble with your yarn strength in the mill, if the yarn strength consistently drops, you check your roll settings and perhaps make some adjustments, and so forth. You do not necessarily have to change the fiber or change the twist. You can improve your yarn by making it more even.

Those, I believe, are the three factors and the only three factors we need to measure to be able to predict the strength in any yarn in any construction. It is the character of the yarn which mainly contributes to the quality of your fabric. If you make a nice looking yarn your fabric, regardless of the weave, is going to be improved.

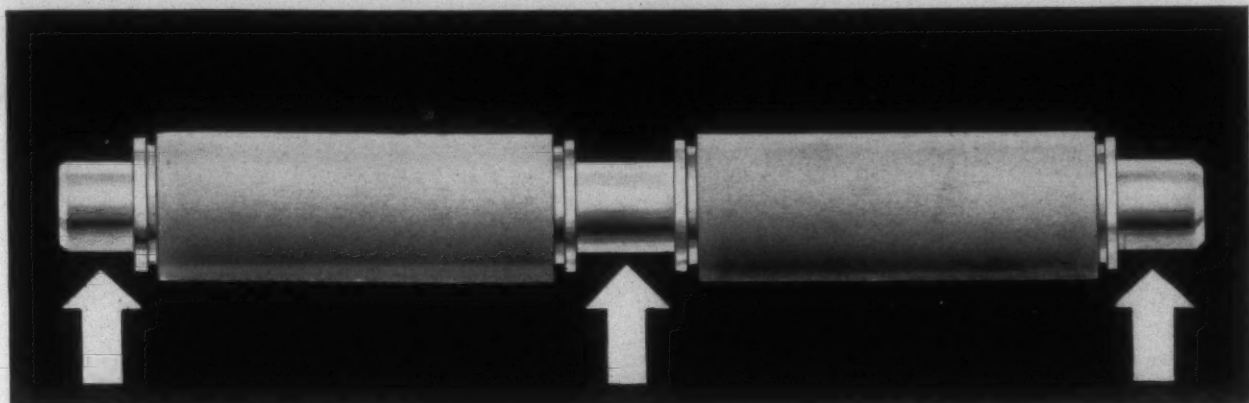
The question is, how are we going to measure and express these factors? We have done some work at North Carolina State College on this, and I have brought along a few drawings which I hope will not confuse the issue. They may help to clear it up as we discuss these separate measures.

The strength of a fiber we have taken as the product of the count times the breaking strength. That is, if you have a 40s yarn which breaks at 50 pounds, your product is 2,000. That measure varies a good deal less than the strength itself, although it is not constant. As the yarn count gets finer the strength drops a bit. At a 20s count a yarn may break at 100 pounds, giving a product of 2,000; at 30s count the breaking strength may drop to 60 pounds, which would give a product of 1,800. The reason for that decline must be due to the irregularity of your yarn. As you draft it, it becomes more and more uneven; that is, comparing the thick places with the thin the difference between them becomes greater. So that decline we take as the measure of the regularity of the yarn. The United States Department of Agriculture has done a good bit of work with that, although it has concerned itself only with American cotton. It has shown that the percentage of decline is 21.7 per cent.

The second common relationship between your count strength and twist is indicated by the sort of diagram, where you plot twist against the count strength. The strength increases as you increase the twist, hits a maximum, and then drops off rather more gradually than it rose. In soft-twist yarns, as for knitting, you find less drop. In crepe twist you find the strength has gone down. The reason why this hits a maximum and then drops off is that your fibers are beginning to lie obliquely in the yarn, rather than parallel to the axis, and you are not getting the total fiber strength by pulling on the yarn. The strength decline is due to the way the fibers are placed in the yarn at these high twists. Knowing that, we can figure out from this decline how much our yarn strength is affected by fiber twist. We know how much that drops off per unit of twist, and from that we can figure out what the obliquity of the fibers is and by making a correction for that obliquity can straighten out that upper part of the curve.

Knowing that, we are able by a method which is disgustingly mathematical to draw a prediction curve which will serve for all fibers. It is a curve which ordinarily is laid out on transparent paper, which we can lay on the actual curve and see the difference. What you do in practice, in your spinning laboratory, then, is to spin a coarse yarn with very high twist; and from that get a point which can be corrected on the curve. It might be a distant point;

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spin another yarn which is finer, with softer twist. You might get a point here. Knowing those points, we can superimpose these curves on it until it matches and find the point where that curve cuts your base line. That distance is a measure of the fiber cohesion, or the way your fibers cling. As you know, when you spin spun rayons you can get your maximum strength at a lower twist than you can with most cottons. The reason for that is the difference in fiber cohesion. The spun rayon fibers cling together much more readily than do the cotton fibers and give you your

maximum strength sooner. With coarse Indian cottons it takes a good deal more twist to begin to add strength to the mass of fibers that we have to put into yarn.

Without going into any great detail, those are the essentials of our method. We get our fiber strength from the count-strength product, corrected for twist. We get our fiber cohesion from learning the place where this curve cuts the base line, by superimposing that theoretical curve, which works up very well; and we get our evenness, our regularity measurement, by measuring the slope or decline of this line here.

Mr. Bogdan was one of the speakers during the meeting of the Piedmont Division, S. T. A., at Charlotte, N. C., May 1.

THE MILL OF TODAY

By ROBERT Z. WALKER

Part Four — Horizontal Openers

THE conventional opening line of the average mill spinning cotton consists in general of a number of feeders, a vertical opener, and one or more cleaning machines which have a horizontal beater. The most satisfactory manner in which to arrange this machinery is to pass the stock from the feeders to the vertical opener and then to the horizontal beater machines. This arrangement has been supplanted in the past by a few mills in favor of an opening line with two vertical openers, or with a single vertical opener after the horizontal beater machines. Many exhaustive tests and experiments in a number of mills have shown that, with the modern opening machinery now available, the most complete cleaning, opening and blooming of the cotton will be accomplished with the least loss of good spinnable fiber when the vertical opener is followed by two of the beater machines.

Whereas all vertical openers are to all intents and purposes the same, there are several different types of cleaning machines founded on the use of a beater held in a horizontal position. All of these machines have the same objective and are used in the same manner, so that, for the scope of this discussion, a description of a single model will suffice. This particular machine is called the lattice opener.

The lattice opener is usually fed by means of a condenser which is situated above it. The condenser draws the stock from the vertical opener and drops it into a chute with a bottom formed by the feed rolls of the lattice opener so that the feed rolls feed the cotton straight down into the path of the beater. The clumps of fibers which are separated from the fringe of stock fed are then taken around the periphery of the beater between the beater blades and the grid bars which surround a large portion of the beater. The main sections of the machine which are of general interest to the mill technician are the condenser feed, feed rolls, the beater, grid bars, and the feed control.

The condenser is composed of a fan for the purpose of generating the air current and a screen section which collects the stock into the proper thickness. The stock from the vertical opener is drawn through the vertical opener and along the conveying pipes by the air current generated at the condenser feeding the first lattice opener. If two lattice openers are used in the opening line there will be a conden-

ser over the second opener which will generate the air stream necessary to pull the stock from the outlet mouth of the first machine. The two condensers and the two lattice openers are identical in appearance, operation, and in the type of cleaning performed.

The condenser is fitted with a feed chute located so that the stock collected at the screen will be held until the feed rolls of the lattice opener draw it into the path of the beater. The great advantage of the chute is in being able to maintain a sufficient supply of stock at all times so that the opener will be able to process the same amount of stock whenever it is in operation. If the amount of stock passing through the opener is the same at all moments then it is much easier to feed a continuous even sheet of stock to the picker. The presence of the chute feeding the opener is an important aid toward achieving the evenness of the final lap, and it should be remembered that the evenness of the picker lap is one of the qualities essential to the spinning of fine even yarn.

The feed rolls of the lattice opener form the bottom of this chute. The entire condenser assembly is located so that the feed rolls of the opener will be able to feed the fringe of stock directly downwards into the path of the beater, and at the top the path of the beater. The feed rolls are far enough away from the beater so that the danger of striking fibers held by the nip of the rolls is eliminated. The stock is held so that the fringe being struck is composed of clumps of fibers that are in a loosely connected, partially opened condition. There are some lattice openers in operation today which have two sets of feed rolls, the upper set made of wood and the lower of steel. The wooden feed rolls are six inches in diameter and feed the stock down between them to the fluted steel rolls which are three inches in diameter. When the two sets of feed rolls are used the gearing is set up to produce a draft of three between them. The purpose of the draft is to break up any large clumps of fibers so that the feed will be more uniform.

Recent tests have confirmed the experiments that have been made questioning the value and desirability of the presence of the steel feed rolls. It has been proven that the removal of the steel rolls in their entirety will result in more thorough opening and more effective cleaning. There are

several reasons why the absence of these rolls is to be recommended. First, the stock which is delivered into the chute of the condenser has been passed through the vertical opener and has been partially opened. If this partially opened cotton is fed through a pair of small feed rolls the result is that it is again compressed and must be reopened. The beater must expand a number of beats to reopen the stock back to the point at which it left the vertical. Thus a number of the total beats per inch are wasted as far as the final cleaning is concerned, and here again it is the desire of the technician to keep the total number of beats per inch that the fiber is subjected to down to a minimum. In fact, the entire opening and picking process is a compromise between increasing the number of beats per inch to obtain better cleaning and reducing the beats per inch to lessen fiber damage. By not compressing the stock at the opener the need for reopening is avoided and a more thorough cleaning is attained without increasing the beats per inch of the fringe. The second reason for removing the fluted steel rolls is due to the fact that they actually make the removal of waste more difficult. An examination of spun yarn will show that there are never any large pieces of leaf or waste tangled in the fibers. It is commonly understood that the most difficult type of waste or foreign matter to remove from the good fiber is "pepper trash," or the pieces of dried leaf and stalk which are very small. When the feed rolls of the lattice opener compress the stock they also break large pieces of foreign matter into the smaller sections which are harder to remove.

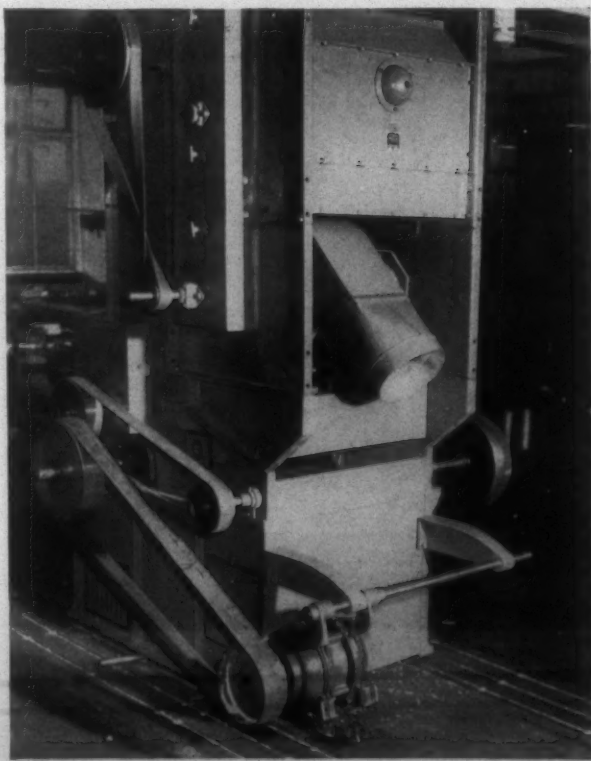
The beater around which the lattice opener is centered is designed to give the maximum cleaning with a minimum of harsh beating and fiber damage. The beater itself is made up of 16 steel discs mounted on a central steel shaft. Each disc is equipped with 12 steel fingers or picks, so that there is a total of 192 picks on the beater. The picks are arranged so that every section across the fringe of stock will be struck, and are staggered so that the time of entry of the individual pick will be slightly different. As a result of this arrangement the fringe of stock is fed down to the beater and held in this position loosely while the picks of the beater comb through it, knocking out waste matter, and separating the fringe into small clumps of fibers. The only attention that must be paid to the beater is to examine the picks periodically and to replace those which are in need of repair. The picks are easily removable and should be replaced whenever they become worn and rounded at the edges.

The recommended range of beater speeds for most conditions is between 450 to 650 r.p.m. The speed of the beater that is most satisfactory in any given case will be influenced by such factors as the amount of cleaning that has already been given the stock, the amount and type of foreign matter present, and the character of the cotton itself. Tough, wiry fiber with a large percentage of waste matter present requires a more vigorous cleaning, and is more able to withstand the treatment without excessive fiber breakage or damage. A disadvantage of using very higher beater speeds is that there is a tendency for the beater to extract more good fiber from the stock, as waste. Beater speeds may be regulated by either changing the pulley on the beater shaft or by changing the pulley on the motor shaft as the lattice opener is generally independently driven by a motor driving directly to the beater shaft.

Approximately three-fourths of the periphery of the

beater is surrounded by grid bars. The presence of such a large number of grid bars is one of the reasons explaining the highly efficient manner in which the lighter particles of trash are removed. An examination of the waste found in the waste compartments of the machine will reveal a very high percentage of motes, together with a large amount of the lighter leaf particles. When the vertical opener is used in conjunction with the lattice opener an analysis of the waste removed by the two machines will show that the vertical will take out the heavier waste such as stalk, large leaf sections, and sand or dirt while the lattice opener will remove the smaller leaf particles and the motes. The two machines differ in the type of waste removed to a certain extent and so a combination formed of the two gives the greatest possible amount of cleaning.

The grid bars are of the conventional triangular cross-section, positioned with the thin edge toward the beater, and held in such a manner that the working edge is always the same distance from the end of the picks regardless of the angle to which the bars are set. The bars are held against a cheek with a cammed adjustable movement for regulating the angle. The standard machine has 80 bars, in sections of 20 each but every group of ten bars can be adjusted independently. Beneath the grid bars the machine is divided into two spaces which act as waste compartments. These compartments are large and are closed in at all points except at the grids, so that there will be a minimum amount of air disturbance beneath the grid bars. This large compartment for waste is separated into two sections so that the turbulence of the air will be reduced as much as possible. The removal of very light trash is more complete as the presence of any volume of air current passing from the waste compartment would tend to carry light trash that had been removed right back through the bars into the stock again. The machine is designed so that the air current

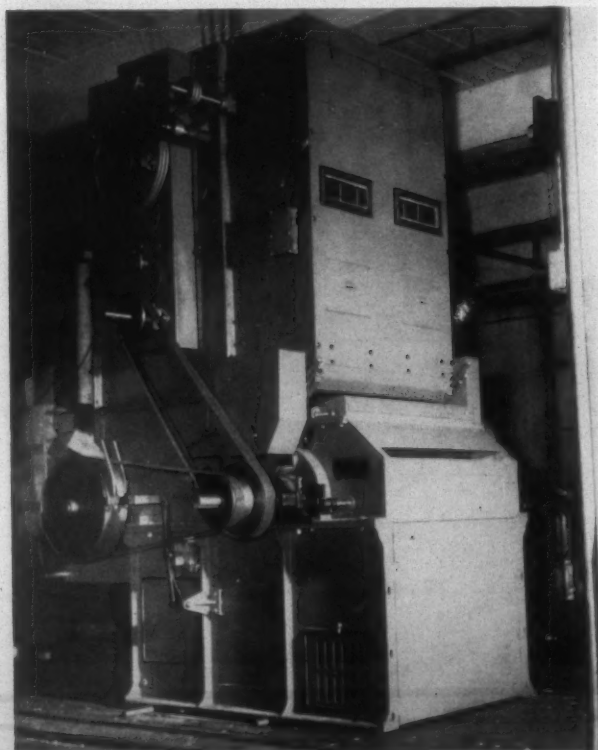


Left-hand side of opener and condenser, showing motor drive direct to beater shaft of opener.

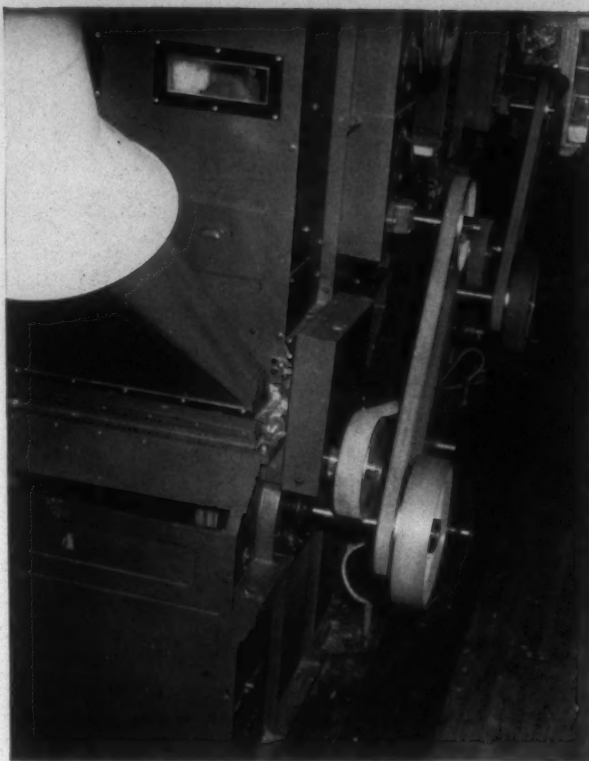
which pulls the stock from the delivery mouth of the lattice opener will enter the machine through the last few bars at the front, or delivery end, of the machine. At this point most of the cleaning has been accomplished and the likelihood of drawing trash back into the stock is reduced. Generally it will be found that about twice as much waste will be extracted and deposited into the waste compartment at the back of the machine, or under the first grid bars, than at the front.

The setting of the grid bars in regard to the angle at which they are opened is governed by the same principles as grid bars in the vertical opener. The bars should be set more open for short or dirty cotton than for long or clean stock. The bars should not be set at the same angle completely around the beater but should be closed progressively. The bars nearest the feed rolls should be utilized to perform the greatest waste removal and so should be set at the greatest angle with each set of ten thereafter closed slightly. The last section of grid bars are generally kept fairly closed.

This type of beater has been used for many years for the opening and cleaning of cotton, and is called the Buckley beater or porcupine beater. It was the practice for a long time to make pickers with the breaker section having a Buckley beater but this practice has been discarded in favor of using only blade and carding beaters in the picker. There were also several different diameters of Buckley beaters that were widely used, ranging from 24 to 30 inches. The beater that is used in the lattice opener is of 24-inch diameter at the outside end of the picks. The small diameter is preferable over the larger diameters as the radius of curvature of the grid bar is greater. An abrupt curvature is beneficial as the stock is thrown against the bars at a sharper angle and returns to the beater at the same angle so that the cleaning



Right-hand side of lattice opener with condenser feed. Solenoid switch and belt shifter which controls drive of feed rolls may be seen.



Delivery end of lattice opener, showing feed chute (with observation window) and cone mouth connection to conveying pipe. Upper part of machine is the condenser feed.

effect is greater. The higher radius of curvature causes the stock to be thrown against the grid bars more times in its passage through the machine than if the diameter was greater and the curvature less.

The modern lattice opener is fed from the condenser with the feed chute so that the name lattice opener is not really applicable. The lattice opener of former years utilized a lattice apron to feed the stock to the beater. The stock was fed either directly onto the lattice or else deposited onto it by a screen section. These methods of feeding have been dropped in favor of the feed chute, and the lattice removed from the machine entirely so that only the name remains. The main reason for the change in design was the introduction into the opening and picking room of the feed control systems. The feed control system is a control extending throughout the two rooms so that the feed and operation of the individual machines will be kept closely co-ordinated; for if the feed and delivery of the machines of the opening line are held equal then the amount of the stock fed to the picker will be more constant and the finished laps will be more even.

The lattice opener is controlled in its feed and delivery as part of the general feed control system. The feed rolls of the lattice opener are driven by a pulley on a countershaft located at the back of the machine. The countershaft is driven by a pair of tight and loose 18-inch pulleys on the right hand side of the frame, while the tight and loose pulleys are driven by a belt from an eight-inch pulley on the beater shaft. The belt which drives the tight and loose pulleys is held between two upright steel fingers which are attached to a lever that is pivoted at its lower end. The lever is connected at its middle by a rod connected to a solenoid switch. When the solenoid switch is closed the belt shifter is held in and the belt is held onto the tight pulley, the feed

rolls turn and stock is fed into the beater section. When the circuit is broken the solenoid releases the lever, which falls outward and shifts the belt to the loose pulley, stopping the feeds rolls and the delivery of stock from the opener. The solenoid switch of the first lattice opener is controlled by the rake in the feed chute of the second opener in the line. The solenoid of the second machine is controlled by the rake in the reserve feed chute of the picker.

The production of the lattice opener is a maximum of approximately 1,200 pounds per hour. The production is controlled by the production change pulley located on the left hand end of the countershaft. This pulley furnishes the drives for the feed rolls so that the change in size of the pulley changes the speed of the feed rolls. A larger pulley will increase the rate of feed and the production.

One of the points of operation of the lattice opener that is sometimes neglected more than should be is the control of the air currents passing through this section of the opening line. Curling or stringiness of the stock is caused by operating the opener with an insufficient air stream. If the current is too slow or weak the fibers remain in the beater section for too long a period and are excessively beaten. The only manner in which to adjust the fan speed properly is to examine samples of stock that have passed through the machine and then make the changes that are deemed necessary. The lattice opener which delivers the opened stock to the conveying pipe leading to the picker room is generally fitted with an adjustable cone mouth out-take. The cone mouth consists of a large flanged mouth which is the intake end of the conveying pipe. The pipe from the opener fits up against the flange but is not held tightly against it. The

cone mouth makes it possible to draw some of the air for the air current in the conveying pipe from the atmosphere in the opening room, so that the air stream in the lattice opener will not have to be excessive. It is necessary to have a portion of the air stream originating in the opener but the precise amount must be determined by experimentation. The adjustment of the proportion of air drawn from the two sources is made by moving the pipe from the opener either closer to or farther from the flange of the cone mouth. By moving the pipe further from the flange the amount of air drawn from the room will be greater and that from the opening line less.

The evaluation of the efficiency and effectiveness of any opening process should encompass the following factors: (1) the percentage of waste removed, (2) the constituents of the waste, whether it is sand, large or small particles of leaf, boll, and stalks or motes, (3) the accomplishments of blooming, which is the removal of fine dust from the fibers, (4) the reduction of the size of the clumps of fibers, and (5) the reaction of the fibers to the treatment given them by the beaters or cleaning apparatus of the machine. An opener which is removing a large percentage of waste without the loss of good spinnable fiber, which is reducing the size of the groups of fibers fed into it without weakening the fibers or curling them, and which is removing the lighter waste particles is performing its duty in a beneficial manner and its use is to be recommended, on the other hand, a machine which is curling fibers and is so harsh in its treatment that the fibers are broken or weakened, or which removes only a small amount of trash with a loss of good fiber, is definitely not the machine to use.

Warp Preparation & Weaving

The Electrically-Driven, Moisture-Controlled Slasher

By E. J. EADDY, General Manager, The Textile Shops, Spartanburg, S. C.

THE textile industry for a great many years has voiced its approval to technicians and engineers, who were developing advanced methods of manufacturing, and today they are more interested than ever, in the development of precision processing, which offers them lower cost, better quality, more flexibility, and more efficiency. In almost every case, the trend of new equipment is towards high speed processing with automatic controls, and that is the type of equipment offered in the all-electric driven Moist-O-Graph controlled slasher, which I have been asked to talk on today.

For the benefit of those who have not had the privilege of seeing an all-electric Moist-O-Graph controlled slasher I would like to describe briefly such a machine. First of all we must obtain a source of direct current with varying voltage for the individual motors which will eventually drive the slasher. Therefore for this we supply a one piece four-unit motor generator set consisting of a squirrel cage driving motor, a D. C. variable voltage generator, a D. C. voltage

exciter, and a Rototrol for maintaining a constant tension on the yarn, as it is wound from the delivery roll onto the beam. The size of this equipment depends upon the type of slasher concerned, as well as the speed range of the slasher and the degree of tension necessary to be maintained on the yarn, while it is being wrapped onto the beam.

In addition to the power supply system we furnish a main control cabinet, into which are located a number of resistors, contact switches, rheostats and direction flow apparatus. It is through this main cabinet that all of the individual motors are adjusted and controlled when the slasher is ready for operation.

For the size box feed rolls (which are normally driven by a side shaft and a set of bevel gears), we supply a D. C. variable-speed motor and rheostat to replace the side shaft and bevel gear arrangement. The D. C. motor is usually placed between the size box and cylinder section, and the shaft of the motor is connected to the two size box feed rolls by means of chain and sprockets. The rheostat furnish-

ed with this D. C. size box motor is usually mounted close to the size box, and it is with this rheostat that we regulate the tension between the size box delivery rolls, and the delivery roll at the front end of the slasher.

The cylinders of an electric-driven slasher are usually un-driven especially when they are anti-frictioned with ball bearings and Johnson joints. Also, the rate of acceleration and deceleration of an electric-driven slasher is so uniform, that the normal tension necessary to split the sized yarn is ample to rotate the cylinders. In some special cases it may be necessary to motorize each cylinder and although this has been done, it is rarely essential.

For the front end of the slasher we supply a D. C. variable speed motor which drives the delivery roll by means of chain and sprocket, and this motor is known as the lead motor. It is from this motor that the maximum operating speed of the slasher is set, and the size box motor and the beam motor are synchronized to the delivery roll motor.

We also supply a D. C. variable speed motor and rheostat with a visual meter to drive the beam. Also supplied for the beam drive are the necessary chain and sprockets to connect the variable speed motor to the main center shaft of the old friction. However, should the old friction not be of the proper construction, a new frame work, bearings, friction shaft and dog would be supplied to properly handle this drive. The rheostat with the visual meter is mounted directly above the delivery roll, and with it the operator can adjust the tension of the yarn between the delivery roll and the beam onto which the yarn is being wound, as this rheostat has a visual meter, it also indicates to the operator the amount of tension being placed on the yarn by the beam motor. Push button controls are located along the frame-work of the slasher and there are six push button control stations along each side of the slasher. These push button stations are marked STOP, SLOW and FAST.

For the paddle fan which is located between the cylinder section and the front end of the slasher we furnish an A. C. motor, sheaves, belts and switches. This motor is so wired into the control stations that it operates only when the slasher is operating.

The all-electric slasher drive eliminates entirely the old type friction clutch, the gearing between the friction clutch and delivery roll, the bevel gearing between the delivery roll and the side shaft, the side shaft itself, both cone shafts, the bevel gearing and gear segments normally used to drive the cylinders and the bevel gearing arrangement at the size box. The few remaining parts are anti-frictioned so that the slasher operates smoothly at maximum speed, as well as offers trouble free operation for a long period of time.

Practically all improved and modified slashers provides for an operating speed range varying between 18 yards per minute and 70 yards per minute. Creeping speeds of four to six yards per minute are usually provided for most slashers, however, any speed range necessary to meet the specific requirement of a particular mill can be designed and supplied. A great many of you are familiar with the conventional type slasher which has been equipped with recording, controlling and indicating type Moist-O-Graph, and everyone agrees that an automatic controlled slasher offers a great many operating advantages. Nevertheless, let us now

apply to our electric-driven slasher, an automatic controlling, recording and indicating Moist-O-Graph.

The various components of a Moist-O-Graph are somewhat complicated, however, it may briefly be described as follows. A primary measuring device in the form of a detector roll is mounted above the back press roll on the delivery end of the slasher, and this roll contacts the yarn as it passes over the back press roll, which has been electrically grounded.

Passing through a cable from the main instrument to the detector roll is a small electric current (20 millionths of an ampere), and the amount of current which will pass from the detector roll, through the yarn to the back press roll (which has previously been grounded), bears a definite relationship to the moisture content of the warp between the detector roll and the press roll. This current is accurately measured by the instrument known as the Moist-O-Graph, and in turn this instrument is calibrated to indicate and record in percentage, the amount of moisture in the yarn which is commonly expressed as "Regain." The Moist-O-Graph is equipped with indices which can be set to the upper and lower limits of the desired regain, and when the regain is too high, the Moist-O-Graph automatically decreases the speed of the slasher; and when the regain is too low, the slasher speed is automatically increased. The manner in which the Moist-O-Graph makes this speed correction is known as floating action. It employs a reversible electric controlled motor which is connected to the speed controlling rheostat of the electric driven slasher. Electrical contacts to drive the Moist-O-Graph motor in either direction are made through mercury switches located in the Moist-O-Graph instrument, and these switches are mounted so that no contacts are made when the instrument pen (or indicator) is within the neutral zone, which is correct moisture zone. However, these switches are mounted so that the high contact is made when the moisture content rises above the upper control index and the low contact is made when the moisture content falls below the lower index, and by so operating makes possible an automatic speed control for regain.

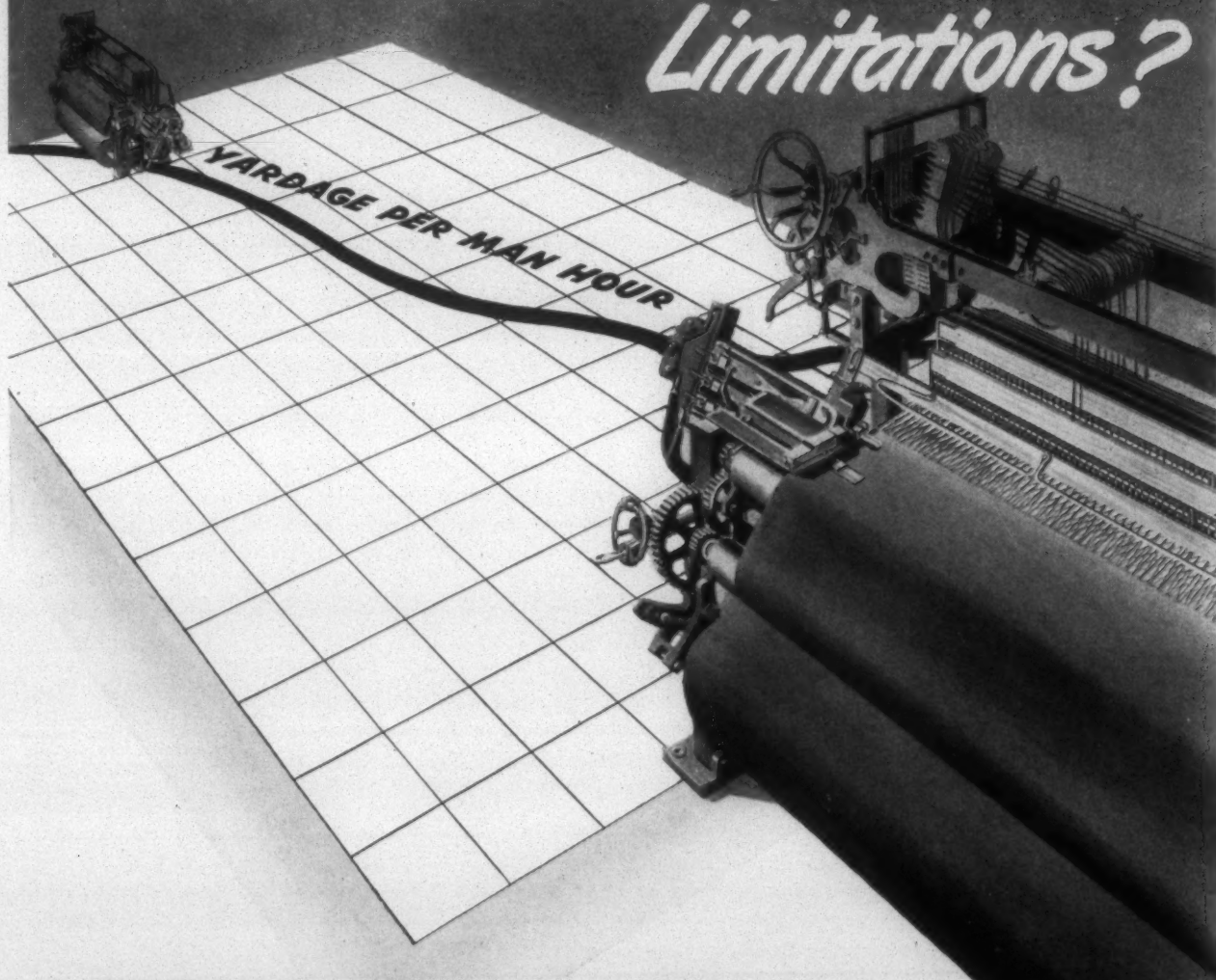
There are a number of switches and time delay mechanisms contained in the Moist-O-Graph instrument, but time does not permit our going into all of the intricate parts of a Moist-O-Graph. There are, however, located on the door of the Moist-O-Graph several switches which increase the flexibility and convenience of this instrument. One of these, known as the Moist-O-Graph switch permits the recorder and controller system to be turned off, while another permits the recorder to operate but de-energizes the automatic control system. A third switch consists of a pair of push buttons marked fast and slow and these switches permit the manual adjustment of the speed of the slasher, whether the recorder or the automatic control system is operating or not.

There are several other additional controlling instruments which should be included on the slasher, in order to produce the best results in the sized yarn. These may be quickly named as a size box temperature controlling system, a size box level controlling system and pressure or temperature controllers to provide a constant temperature in the drying cylinders.

Also in order that the all-electric Moist-O-Graph controlled slasher may be able to produce its maximum effi-

What Other Production Machine Can Match This 20-Year Record of Steadily Increased Output

Under Such Strict Limitations?



Consider first the three channels which guide all research in development of C&K Looms:

1. **WEAVING MATERIALS:** Natural wool and cotton fibres . . . synthetics . . . or blends . . . each with peculiarities which must be heeded in detail by the loom designer.

2. **WEAVING MACHINERY:** The end-objectives are few . . . higher speeds . . . greater efficiency (fewer loom stops) . . . better quality (fewer seconds) . . . larger beams, bobbins, and rolls of cloth.

3. **MACHINE DESIGN:** The unchangeable operation of efficiently passing filling threads through the warp imposes strict limitations on the types and capacities of interrelated mechanisms used in building C&K Looms.

ULTIMATE OBJECTIVE: To give any mill the most efficient type of loom for its job — at initial and upkeep costs which will yield to that mill the highest profit per loom over the longest period of time.

MEASURE OF SUCCESS: In the last 20 years, one of the most widely used types of C&K Looms has increased its output per man-hour by 61%.

As of now, it certainly seems an open question whether any other type of machine — developed under comparably strict design-limits — can match this 20-year record of C&K Looms.

Meanwhile C&K's engineering research laboratories keep everlastingly at it, to advance loom-performance beyond present levels.

Crompton & Knowles Loom Works

WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA.  CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

ciency we must consider the manner in which the size is prepared for the size box. For this cooking and storing we offer automatic controls which will automatically prepare or hold each batch to identical time and temperature patterns.

I cite the following advantages which may be obtained by employing the electric-driven slasher:

The tension between the size box feed rolls and the delivery roll may be adjusted to any condition necessary for the best result and therefore the operator is able to control the stretch.

The tension with which the beam is wrapped may be set by means of the visual rheostat and this tension remains constant throughout the cycle from empty beam to full beam.

No special attention is necessary from the operator as the Rototrol makes the adjustments to compensate for the constant change in the beam roll diameter.

The same tension can be duplicated at any future time for the same grade of yarn by setting the visual indicating meter at the same previous value.

Once the best beam tension is established the equipment will operate independently of the judgment of different operators, and therefore the human element is eliminated.

Considerable open gearing and other troublesome parts are eliminated thereby reducing to a minimum troublesome apparatus.

The losses due to the wasted energy in the friction are eliminated and the over-all operating efficiency is increased.

The rate of acceleration and deceleration of the slasher is controlled and the yarn tension is always held within safe limits.

The elimination of soft warps will also prove valuable.

Fewer stops for break backs on the slasher and fewer broken ends on the looms will mean an increase in production for both the slasher department and the weave room.

Automatically controlling the electric driven slasher guarantees maximum production of the machine.

Automatically controlling the electric driven slasher eliminates all human elements and controls regain to very close limits with no effort on the part of the slasher operator.

The continuous chart of operations thus recorded will show irregularities and unattentiveness to production.

With continuous chart records you would be able to trace accurately slow downs of operations in order to let the next shift creel and prepare a new set. Continuous chart records may show other irregularities such as poor size, defective yarn and improper adjustments.

The weave room efficiency should be helped by the elimination of over drying or under drying the warps.

Steam consumption should be less due to a more efficient operation of the slasher.

Slasher operators will have more time to devote to other important matters around the slashing operations.

New combinations of yarns, sizing, etc., can be studied on a more scientific basis with an all-electric Moist-O-Graph controlled slasher.

The uniformity of feel and appearance in the finished fabric resulting from the proper drying and handling of the warp yarn in the slasher room will be improved.

The all-electric Moist-O-Graph controlled slasher will not only do these and many other things for your slasher department, but it will also eliminate the noise that is commonly associated with the conventional type slasher and your slasher room will become a better place in which to work.

Mr. Eaddy offered his comments to the Piedmont Division of the Southern Textile Association during its recent Spring meeting.

The Warner & Swasey-Sulzer Weaving Machine

THE revolutionary new Warner & Swasey-Sulzer weaving machine, said to represent the most significant advance in the weaving art since the application of power to the traditional loom a half-century or more ago, was demonstrated in Cleveland, Ohio, June 4 before a gathering of textile and business editors. During the demonstration the machine is claimed to have produced cloth at 2.66 times the output of conventional machines, and is said to be capable of considerably faster operating rates depending on the strength of the yarn being woven.

The present Warner & Swasey machine represents pre-production models based on the original design of Sulzer Brothers of Winterthur, Switzerland, and is being placed in mills for intensive testing under continuous production conditions as a final step in the company's development program. While the Swiss model represented a sound design of precision workmanship, a tremendous amount of engineering has been required to adapt the machine to a form susceptible to economical manufacture by American mass production methods. Every component of the Sulzer design was analyzed for redesign for simplification, ease of maintenance and economy of manufacture.

Warner & Swasey officials state that the new machine differs from the conventional model as radically in appearance and construction as it does in performance. Precision-built according to the best mechanical practice by the 68-year-old Cleveland machine tool manufacturer, the weaving machine is distinctive in the use of alloy metals, anti-friction bearings and high-accuracy machining; in the complete absence of wooden and leather parts; and in the provision of finely-graduated adjustments which make possible a cloth product remarkably free from defects.

The machine eliminates the wooden shuttle containing a bobbin wound with yarn, and utilizes instead a light-weight steel gripper-shuttle, which grasps yarn from a large-capacity wound-cone and carries it through the warp at high speed. The length of filling yarn thus unwound from the stationary cone is automatically held in the warp by tensioning arms while being cut off from the cone, and the ends are tucked into the selvage. The shuttle is directed through the warp by intermittent steel guides, and so never touches the warp yarn, doing away with a source of yarn abrasion normally encountered. Completing its high-speed, yarn-carrying journey, the gripper shuttle joins a number of

IF

KNOWLEDGE • EXPERIENCE
RESEARCH • EXPERIMENTATION

and a desire to produce something superior means anything in a product, then
the Loom Harness Equipment, consisting of

Flat Steel Heddles • Loom Frames • Loom Reeds
Shuttles • Warp Preparation Equipment • Drop Wires
that bears
the

Steelhedco

Trademark
should be your only choice.

There is a Half-Century of Experience, and a
loyal, well trained organization behind every-
thing bearing same.

Profit by this experience.



STEEL HEDDLE MFG. CO.

2100 W. ALLEGHENY AVE., PHILADELPHIA 32, PA.

and

SOUTHERN SHUTTLES DIVISION

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others returning by conveyor below the cloth for a later cycle. Continuous supply of weft yarn in large cones results in sustained production of cloth without constant operator attention to bobbins, and also eliminates preliminary operations presently required in winding yarn on the numerous small bobbins.

The features which primarily distinguish the Sulzer weaving machine from an ordinary loom may be summarized as follows: (1) The filling is carried across the shed from a package on one side of the loom by a shuttle which is returned outside of the shed. The filler threads are cut off after each pick, so that separate picks in the cloth are not connected with each other. (2) The selvage, which may be either "tucked" or "twisted," is woven by means of special devices.

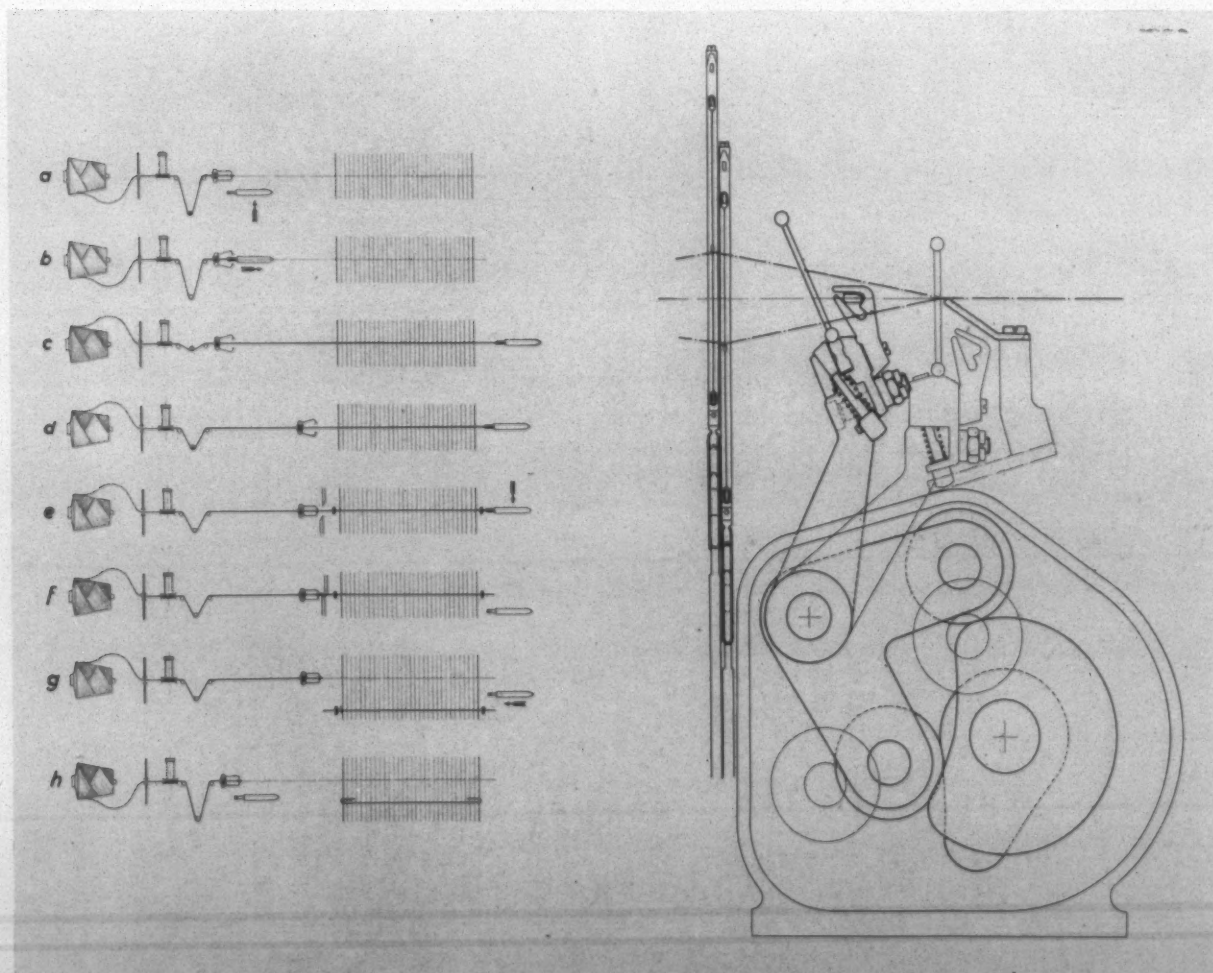
These primary characteristics as well as other subsidiary features are analyzed in the description which follows.

Filling Insertion

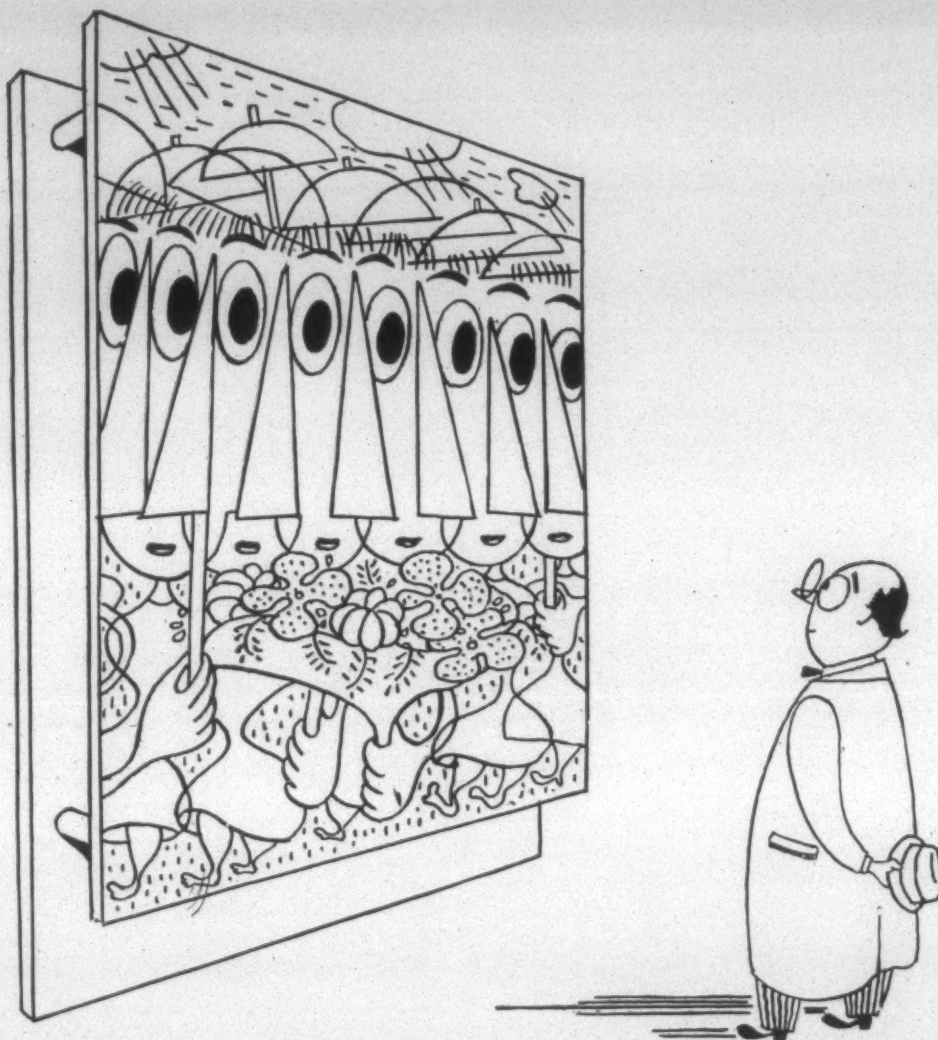
Filling insertion is entirely different on this machine and the method of accomplishing this is diagrammatically shown in the accompanying drawing. Referring to Diagram *a*, the filling is taken from package (1), through a thread tensioner (2), and a vibrating tension arm (3), to a thread

gripper (4). The shuttle (5) rises from its conveyor with its gripping fingers open into the position shown in Diagram *b*. The gripping fingers of the shuttle are then closed, gripping the end of the filling, and the fingers of the shuttle gripper (4) are opened. The shuttle is then fired across the shed, as in Diagram *c*, taking the filling with it, tension arm (3) meanwhile relieving the tension on the filling. In Diagram *d*, the shuttle in the receiving box is pushed back into a definite position, the tensioning arm (3) putting the required amount of tension on the filling yarn. At the same time, the shuttle gripper (4) advances to the position shown in Diagram *d* and its fingers are closed as in Diagram *e*. At the same time, two grippers, (6 and 7) grip the filling and hold it while a pair of scissors (8) cut off the filling, and the shuttle releases the end of the filling and is ejected onto the conveyor, as shown in Diagram *f*. The pick is then beaten up, Diagram *g*, while the grippers (6 and 7) still maintain the filling under the desired tension. The gripper then returns to its original position, as shown in Diagram *h*, the shuttle is again ready to come into position, and the ends of the selvage are tucked in, if the tucked selvage is used.

It can be seen that the filling is never released and is always under perfect control, and the proper tension can be maintained through the beat-up. The shuttles are returned from the receiving to the picking position by a conveyor, which is comparatively slow-running. A number of shuttles



At left, schematic diagrams illustrate the picking action of the Warner & Swasey-Sulzer weaving machine. At right, motion of lay bar—which carries reed and shuttle guides—is indicated by dotted and solid outlines to show the extreme positions.



it all depends on your point of view

When our customers think of STEIN-HALL some see laboratory smocks and rubber gloves . . . and some see pin-stripe suits and order pads.

The astigmatism needn't be corrected though, for STEIN-HALL actually is *all* of them . . . and at the same time.

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are used on the loom, the exact quantity depending upon the width of the loom.

Filling Package

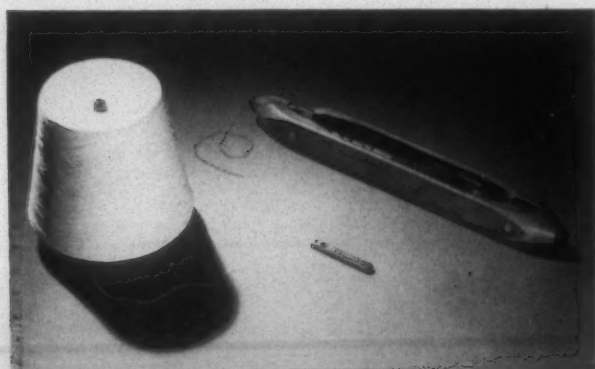
The filling package may be a cone, a Barber-Colman cheese, or any desired form from which the yarn can be readily pulled off. The practice is to pigtail these cones together so that several can be put in the loom at once and thus filling tending is reduced to a minimum. Additional packages can be put in place while the machine is in operation, making possible continuous production. By the use of this type of package, all cop winding is done away with and all bobbin operations, such as cleaning, etc., are likewise eliminated, as is the cost of bobbins.

Shuttle

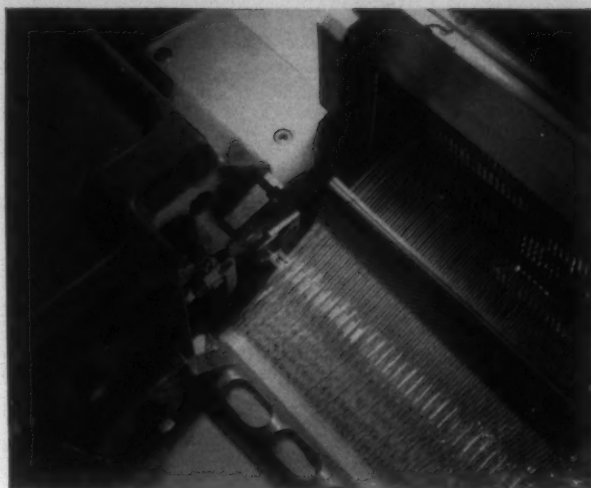
The shuttle is made of hard steel, is $3\frac{1}{8}$ inches long by one-half inch wide by one-fourth inch thick, and weighs approximately one ounce. A spring gripper is built into the shuttle with its gripping surfaces at the rear end. The opening and closing of this shuttle gripper is accomplished by shuttle openers which are built into the picking and receiving boxes.

The shuttle is always picked from the left-hand side of the weaving machine, and passes through the shed through shuttle guides. These guides are attached to the lay bar, and by the movement of the lay are positioned in the shed at the proper time. The small size of shuttle and the method of guiding it across the shed has two effects: first, the shuttle never touches the reed or the yarn; and secondly, it is possible to use a much smaller shed and a much smaller travel of the lay. The lift of the harnesses is also greatly reduced. The small size of the shuttle, together with the small lay motion and shed opening, are some of the reasons why it is possible to speed this machine up greatly over the conventional loom, the company claims. Machines at the Warner & Swasey Co. have been operated at 240 picks for a machine of 110-inch width in the reed, and it is believed that the limit of speed has by no means been reached and that the ultimate limiting factor will be the strength of the filling yarn.

The shuttle is flipped rather than picked through the shed by a small lever operated by a torsion rod, which is loaded by a cam in the picking box. The amount of torsion on



Simplicity of filling yarn supply, as well as the small size of the Warner & Swasey-Sulzer weaving machine shuttle, is dramatized by this illustration of shuttle and cone contrasted with the conventional bobbin-shuttle.

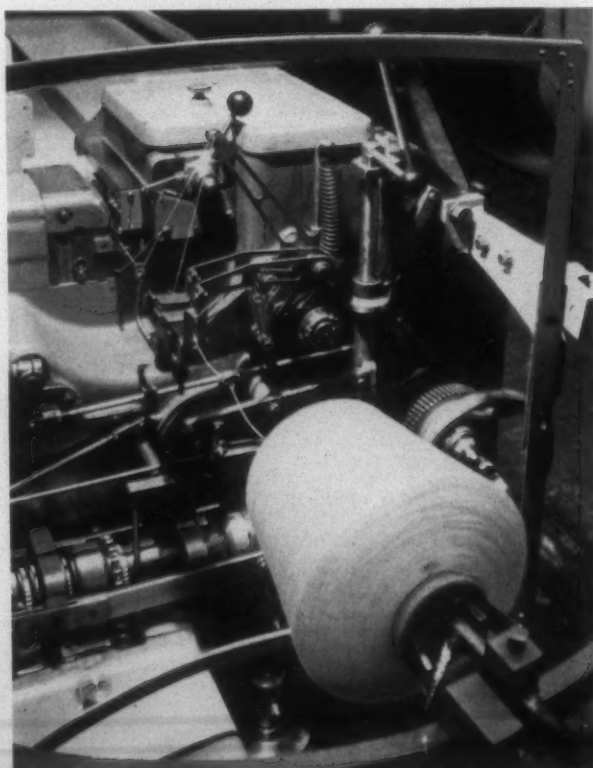


A shuttle holding filling yarn can be seen just entering the shuttle guides on its way across the warp; a gripper holds the cut end of the previous pick, prior to selvage tuck-in.

this rod is adjustable by a graduated head which protrudes through the front of the machine. The picking lever is checked at the end of its stroke by a hydraulic dashpot. After passing through the shed, the shuttle is caught in a receiving box, where it is braked by two adjustable brakes, and exactly positioned. The gripping fingers are opened to release the end of the filling and the shuttle is pushed down onto a conveyor which runs underneath the shed and on which it is returned to the picking box.

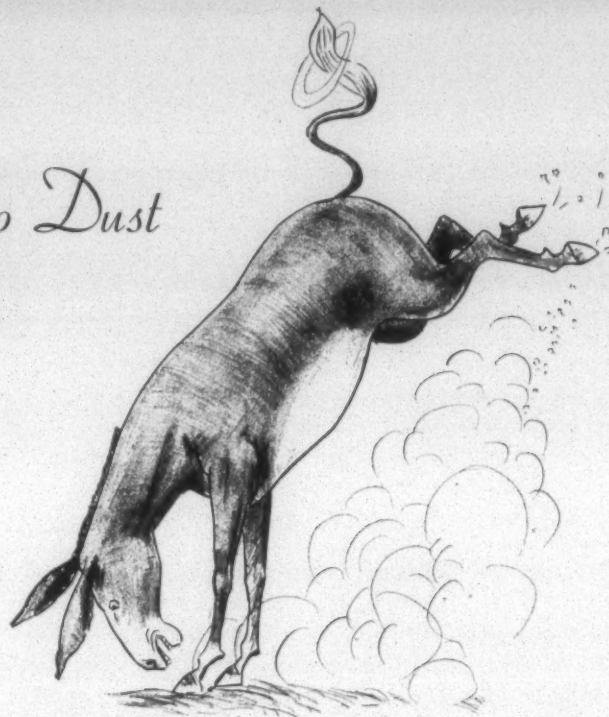
Lay Motion

As the size of the shed is comparatively small, the lay swords are very short and the whole movement of the lay bar is in a comparatively small arc. The lay bar is actuated



Weft yarn feeds from cone through tensioning devices and feeder to the shuttle box. A number of cones can be pigtailed, more added while the machine is in operation.

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WARP PREPARATION & WEAVING

by cams running in oil in a totally enclosed box. Beating-up occurs during one-third of a revolution of the machine, and while the shuttle passes through the shed, the lay and the shuttle guide connected to it stand perfectly still.

Selvage Formation

Due to the fact that the weaving machine picks from one side only, a form of selvage different from the conventional type must be used. To date, either a tucked-in selvage or a twisted selvage is formed. For the tucked selvage, the ends of the filler thread which protrude from the shed after the beat are turned back into the new shed and beaten up with the next pick. The twisted selvage is made by twisting one or several pairs of selvage warp threads. This procedure occurs simultaneously with beating-up of the filler and the change of the shed of the other warp threads. Contrary to the familiar method of twisting warp threads, in which the direction of the twist changes after each turn, the warp threads in the twisted selvage are turned in the same direction for the desired number of picks up to eight, and then are turned in the opposite direction for an equal number of picks. This twisted selvage can be adjusted so as to twist at each pick or to skip a desired number of picks between twisting. The protruding ends of the filler threads

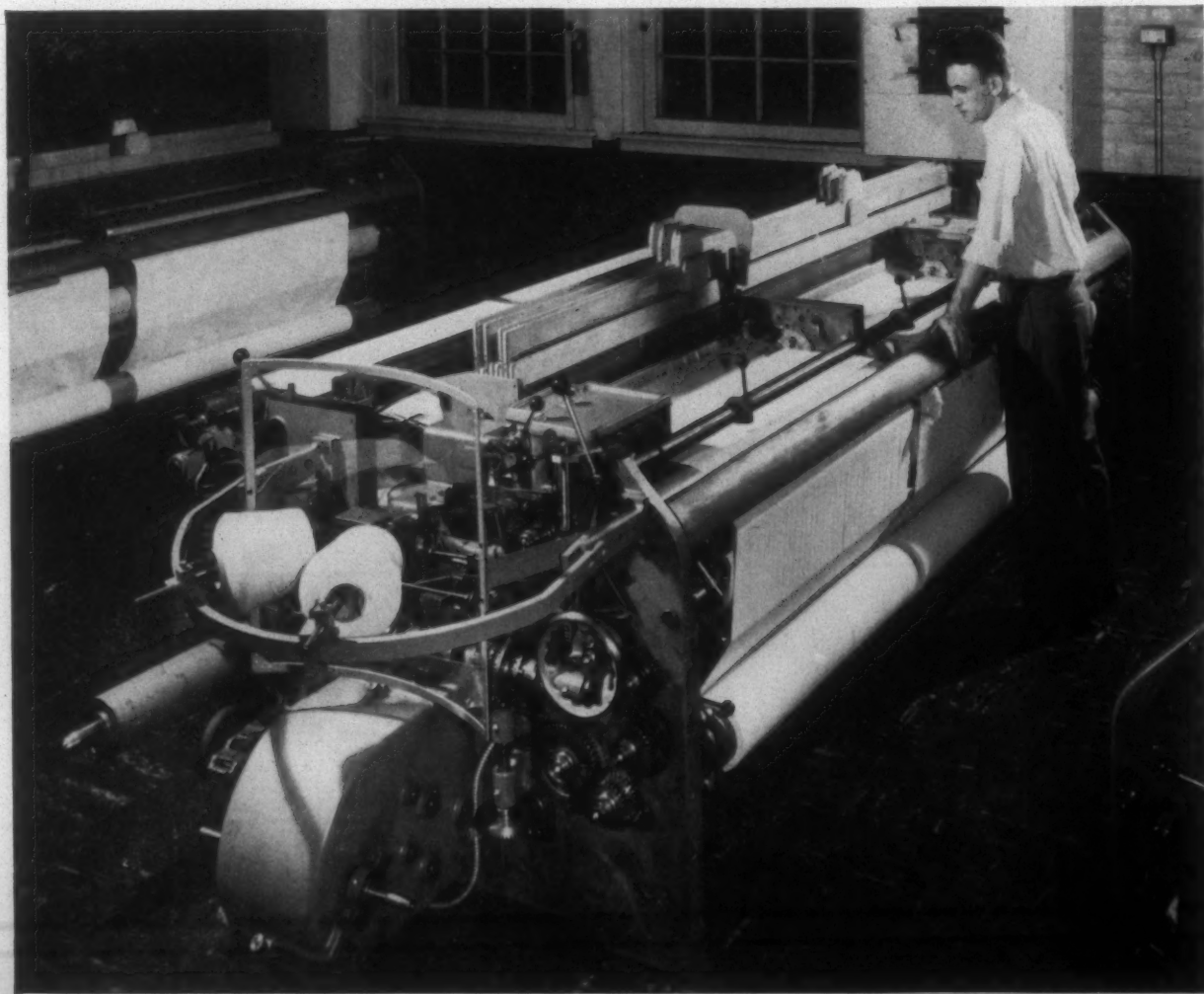
are cut off close to the outer pair of twisted warp threads on the loom. This type of selvage stands up under the most severe finishing conditions of tentering or sanforizing.

While in appearance the twisted selvage is not quite as smooth as the tucked selvage, it has certain advantages over the tucked selvage. It is apparent that the tucked selvage involves two ends of filling in the selvage for each pick, which makes it unsuitable for the heaviest types of cloth construction. There are no such limitations to the twisted selvage. With the twisted selvage it is also possible for the cutter to cut the material right to the edge of the cloth. Both the twisted and tucked selvage units can be used at any position in the loom width, thus making it possible to weave multiple widths of cloth with either type of selvage.

Harness Motion

At present, the Warner & Swasey Co. is building the weaving machine only in the cam loom type, with eight harnesses. The harnesses are positively operated in both directions by cams conveniently located in a box on the picking end of the machine. Removal of the cover of this box by loosening thumb nuts gives access to the cams, and the cams with their shafts are removable as a unit for changing by taking off two half boxes.

A shed closing and pickback attachment can be furnished. When this is used, the harnesses automatically level off



High shuttle speed plus ability to produce multiple widths of fabric is said to give the weaving machine a production rate of two to five times that of conventional looms.

when a warp break occurs, and when a filling break occurs, the machine automatically stops with the shed open. This not only indicates to the weaver what type of break has occurred, but facilitates the repairing of broken ends. By operation of a hand lever, the loom can be picked back by power, one pick at a time, for easy removal of broken filling ends, or picking back a number of picks for removal of weaving errors. While, as before mentioned, the weaving machine is being built for the present as a cam loom only, a dobby and filling mixing device will be available at a later date, and when the dobby head is used, the number of harnesses will be increased to 16.

Warp and Warp Let-off

Single or double warp beams may be used, depending upon the width of the cloth and the number of widths to be woven at once. When more than one warp beam is used, the beams are connected by a differential so that an equal tension on each beam may be maintained.

The receiving box is adjustable widthwise of the weaving machine to the exact width, or widths of cloth being woven. When more than one width is woven, a tucking or twisted selvage unit is located between the two widths of cloth to cut the filling in two and to form the selvage.

The let-off is more or less conventional, and is through a non-reversible worm and gear and a ratchet. The let-off is regulated with a whiproll to maintain constant tension on the warp. The warp beams are 28 inches in diameter, run in roller bearings, and are easily removable by the operation of three levers.

The take-up is more or less conventional through a sand roll to a cloth roll which will take up to 16 inches in diameter. The change gears for take-up are located on the outside of the machine, and are removable by merely pulling off a spring collar.

The weaving machine is individually motor driven through V-belts, pulleys and a clutch. The drive pulley runs constantly, as the loom is stopped and started by means of a clutch and brake. This clutch and brake are operated either by hand or by the various safety and detector mechanisms. The machine always stops within a few degrees on the drive shaft of the predetermined position. The main drive, or one-to-one shaft, is provided with a scale marked off in degrees for ease in setting.

Detectors and Safety Devices

Various devices operate to stop the machine through a control rod which extends the width of the machine. The warp stop-motion is of the electrical type, and when the shed closing attachment is used, the harnesses always level off with a warp break. The drop wires fall into notched bars when a warp break occurs. These bars can be oscillated by hand to show up the location of the warp break.

The operation of the filler detector is such that if the filling breaks, the machine stops before the broken end is beaten up, with the shed open so that it is convenient to redraw the filling. As before mentioned, in case of a filling break it is possible to pick back under power.

A shuttle detector in the receiving box stops the machine instantly if the shuttle is not received, or if it is not located in the proper position for ejection onto the conveyor. As the lay is stationary when the shuttle is fired, stoppage from

either a filling break or from a mis-thrown shuttle occurs while the lay is stationary and before the beat-up. It is, therefore, impossible for beat-up to occur with the shuttle in the shed.

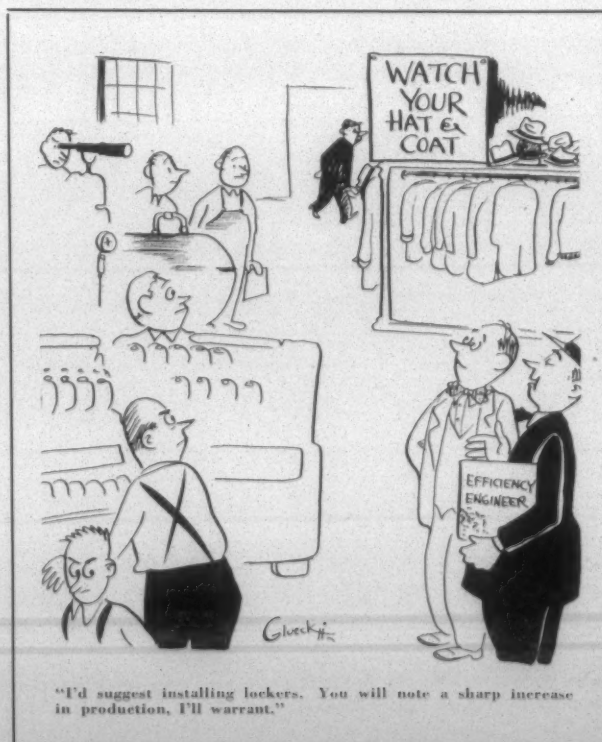
As the shuttle is at all times confined, either in the picking box, the receiving box, or the shuttle guides, it is impossible to have a flying shuttle, and there is no such thing on this machine as a "bang-off." In addition to the above detecting mechanisms, all other mechanisms having to do with the operation of the shuttle are so driven by cams that if one of them fails to function, the machine stops and cannot be started again until the trouble is corrected.

Construction

The machine is precision-built according to the best machine tool practice, it is claimed, and the individual parts are designed to be made according to the best American mass production methods. The materials have been chosen, not on the basis of cost, but on the basis of supplying the best possible service for the duty required. All gears are either precision-ground or shaved; spline shafts are used throughout wherever high duty is required; all bearings are either anti-friction or bronze, and all parts subject to wear run in an oil bath.

Unit construction is used wherever possible. For example: the picking box, the receiving box, the lay motion housing, the harness drive, the tucking units and the twisted selvage drives are all unit assemblies and are removable as such from the machine. Wooden and leather parts, such as pickers, picker sticks, and picker straps have all been eliminated.

The weaving machine is being built at the start with a reed width of 110 inches. Other widths are contemplated and machines have been built in Switzerland up to 150 inches in width. As has been before mentioned, the receiving box is adjustable so that cloth of any desired width up to the limit of the machine can be woven.



Maintenance & Engineering

Lubrication As It Applies To The Textile Industry

By FRAZIER M. EDWARDS, Sales Department Supervising Engineer, The Texas Co., Raleigh, N. C.

IN beginning the consideration of my subject, "Lubrication As It Applies to the Textile Industry," we might ask ourselves a few questions. First, what is lubrication? What does it mean? It is the reduction of friction and the making of continuous motion easy. Next, what is friction? Friction is something that occurs when two surfaces are rubbed together. When the surfaces are dry, it is high; when they are wet, the friction is low. Why is lubrication, or the reduction of friction, important? Because friction means power consumption, wear, and ruin when overlooked.

Friction is divided into two classes—solid and fluid. *Solid friction* is the resistance to motion developed between two solid surfaces when set in motion with respect to one another. *Fluid friction* is the resistance to motion developed between the particles of a fluid, such as lubricating oil. It is impossible to eliminate friction entirely, because motion requires energy. Were this not so we would have perpetual motion.

The resistance to motion, or friction, is indicated in four ways: by slowing down motion; by need of greater driving force to continue that motion; by causing wear; and by generation of heat. The amount of heat generated will depend upon the pressure applied and the speed of rubbing.

How the Lubricant Functions

Metal-to-metal contact causes "solid friction." It is destructive to machinery and wastes power. The purpose of lubrication is to get something that will stay between the metal surfaces and "take the rub," something that will eliminate the destructive "metal-to-metal" friction. That is the purpose of oil. Nothing better than oil has ever been found to reduce friction between metals. But the oil serves another purpose. When supplied in sufficient volume it carries heat away from the bearing, preventing the temperature from rising too high.

Imagine that we have placed a layer or film of oil in between two metal surfaces. This acts as a cushion between them, keeping them apart. Then, instead of metal rubbing when movement begins, the surfaces slide over each other on the oil film, and slide along easily, because the oil film keeps the two metal surfaces apart and prevents contact. The solid or metal-to-metal friction has been changed to fluid friction.

Under these conditions the lubricant is used to keep metal surfaces apart. This eliminates wear and reduces friction, and fluid friction causes less heat than solid friction.

The oil film, of course, does not just lie there and allow the sliding metal to pass over it, as the runners of a sled will pass over smooth ice. The film, being fluid and composed of layers of molecules, is easily set in motion. But

the oil will not be split into two layers, with a clean break between them. It will form a lot of layers, somewhat like a deck of cards, with some resistance between each layer and the next and some resistance due to the particles of the oil moving from one layer into another layer. This causes some resistance to motion. Since fluid friction is involved, however, far less heat develops than if the metal surfaces were actually in contact.

Laws of Lubrication

Friction, as you see, develops heat, and such development of heat is influenced by: (a) the oil film, (b) the speed of rubbing or movement, and (c) the amount of pressure between the moving surfaces.

The relationship can be stated in three basic laws, as follows: (1) When the pressure and the outside temperature are constant, the frictional temperature will increase with the speed. (2) When the speed and the outside temperature are constant, an increase of pressure will increase frictional heat. (The pressure will squeeze out some of the oil, leaving a thinner film. This will cause a rise in the frictional temperature, due to the greater "rate of sliding.") (3) When the outside temperature is constant, the frictional temperature is proportional to the speed and will be increased to some extent by increased pressure.

Fluidity

Oils made from petroleum vary in thickness, ranging from those as fluid as water to those as sluggish as cold molasses. The simplest definition of fluidity is that it is the ease with which a liquid will change its shape to fit the container. For example, if you pour water into a dish it immediately "seeks its own level" and fills the dish, so that the entire surface of the liquid is perfectly level. But if you pour out some cold molasses or a thick oil it forms a little hill or a series of hills which level off slowly, according to the "thickness" of the liquid.

If you imagine both of these liquids as made up of molecules, you will see that the water molecules must have very little resistance in flowing over each other, whereas there must be something about the molecules in the molasses or the thick oil which resists or slows down the flow. You can see, therefore, that a sluggish oil will show high resistance to motion and that this can be measured by rise in temperature.

You may think that this does not amount to a great deal, but if this happens in your mill on many bearings over many days of operating a little oil resistance (internal friction of oil) in each machine will require an appreciable amount of power to overcome it. The heavier the oil, the

greater the oil friction will be. For example, consider how much harder it is to turn over your automobile engine on a cold morning than on a warm day. This is one reason why a light oil is used in cold weather.

Returning to our ideal bearing, where speed, pressure, and outside temperature are constant, we can state the first rule for the selection of a suitable lubricant: *Select the most fluid oil that can be kept between the lubricated surfaces at normal operating temperatures.*

Ball and Roller Bearings

Ball and roller bearings are commonly called anti-friction bearings. Bearings of this type are being more widely used every day in the textile industry where protected lubrication is necessary. They can be oiled, prepacked with grease, or provided with fittings for pressure grease lubrication. You are all very familiar with their application, their variety in design, and their particular usefulness in your plant.

Ball and roller bearings involve rolling contact. Rolling contact is assured when the balls or rollers are held as nearly as possible in perfect alignment with the shaft; then deflections under load are reduced. Some designers feel that it is impossible to eliminate such deflections; they believe that some sliding motion will always occur. This is not serious when we realize that other conditions of operation may vary widely, as, for example, the speed of operation, the load, or the temperature. Any one of these, in its normal variation between minimum and maximum production periods or summer and winter ranges, may have considerable effect upon the performance of a lubricant within such a bearing.

You must consider the operating speeds very carefully. They influence the choice of oil or grease. The higher the speed, for example, the lower should be the viscosity or body of the oil; 80 to 100 seconds Saybolt Universal at the operating temperature of the bearing is the usual minimum limit. The reason for this is that as the speed of operation is increased the more rapidly will the lubricant in such a bearing be churned about, especially if the bearing has been filled too full. Churning causes increase in internal or fluid friction within the lubricant and leads to increase in temperature. This is why oils of relatively low viscosity are preferred for the lubrication of high-speed anti-friction bearings in certain types of textile machines or as a component of greases designed for similar service.

Rolling motion in a ball or roller bearing must be maintained as perfectly as possible. If any one of the balls or rollers stops rolling, it will slide. This will be bad for the contact surfaces of itself, as well as the raceways. This can be prevented by designing the bearing seal so that it will work hand-in-hand with the lubricant to keep out abrasive dust, lint, water, steam, or acids.

The general purposes of lubrication in such a bearing are: (a) to prevent rusting, (b) to facilitate as easy rolling as possible, and (c) to serve as a seal to prevent entry of foreign matter. Easy rolling is attained by lubricating the balls or rollers and the retainers. As a general rule, as light a lubricant should be used as can be successfully retained in such a bearing, in line with the operating temperatures, speeds, and pressures.

Types of Lubricants

When and where to use oil or grease for the lubrication

of a ball or roller bearing will depend upon the operating temperature, the method of sealing, the range of operating speeds, the load conditions, the means provided for relubrication, the service conditions, and the bearing dimensions. These conditions naturally will vary widely, and their combinations may be quite diverse. Some specific one, however, will usually stand out and suggest the type of lubricant which will give best protection of the bearing.

Oil Lubrication

Petroleum lubricating oils suitable for ball or roller bearings will vary over a wide range of viscosity—from virtual water fluidity to products as thick as syrup at room temperatures. One universal requirement always prevails—they must resist oxidation. Provided a petroleum oil meets this requirement, it can be relied upon to function dependably for long periods of hard service.

The choice of the most suitable viscosity will depend upon the bearing seals, the prevailing speed conditions, and the maximum operating temperatures. As a general rule, high speeds and average mill temperatures will require very fluid oils to reduce the internal or fluid friction as much as possible. Under high temperatures, as on finishing machines, where speeds normally are lower, the oil viscosity must be increased. Especially refined cylinder oils or heavy turbine oils are often used in such service.

Grease for ball and roller bearings should be as free from acid-forming tendencies as possible, in order to insure best protection of the highly polished metallic surfaces. The presence of any material that might lead to oxidation and corrosive reaction, or to decomposition or setting, is also objectionable. A properly designed ball or roller bearing will require relubrication only about every three or four months. Oftentimes this period can be extended if the housing holds sufficient lubricant and an effective seal is maintained. But remember, *never pack the bearing too full.*

What Is Grease?

The American Society for Testing Materials states that "The majority of lubricating greases are mixtures of petroleum oil and some kind of soap." The petroleum oils used in grease making may vary from light, pale oils of approximately 100 seconds SUV at 100° F. to heavy cylinder stocks. In some special cases even extreme pressure characteristics may be required. One major marketer today has a premium grade anti-friction bearing lubricant that is also rust and oxidation inhibited. The oils used should be of proper viscosity for the service intended and should be well refined, so as to resist oxidation and gumming.

The soap components should be just as carefully selected as the petroleum oil and should be made from non-oxidizing and non-corrosive fats which are also free from any foreign matter which might reduce the lubricating qualities. The finished greases should not contain any fillers or abrasives which would affect the highly polished metallic surfaces of the bearing.

Types of Greases

Greases are divided into different classes, according to the base or type of soap. These include calcium, sodium, mixed-base, lithium, aluminum, potassium, barium, and lead soap greases. Calcium, sodium, and mixed-base greases pre-

dominate in the lubrication of anti-friction bearings for textile mill machinery. Calcium or lime-soap greases are made with a variety of mineral oils. They should be used only for average temperatures—up to, say, a maximum of 150° F. Above this temperature the water used in their make-up evaporates gradually; then the grease may decompose, causing oil and soap to separate. Sodium-soap greases, on the other hand, are more resistant to heat and so can be used under higher temperature conditions.

A mixed-base grease contains a combination of calcium and sodium soap. Such greases usually have the good features of both, except that they do not have the fibrous characteristics of most sodium-soap greases. They are more like butter and require but little power on starting and running. When carefully selected materials are used, mixed-base greases can be used to pack bearings which are to be stored for a long time, or in service where the lubricant is used for long periods without relubrication. These greases can be used at moderately high temperatures—up to, say, around 225° F., for their stability is uniform over a wide range of temperatures. When a grease is to be used continuously at a temperature of above 200° F., a frequent cleaning and relubrication routine should be followed.

Ball Bearing Requirements

Some people think that ball bearings involve but little chance of friction. As a result, the lubricant in such bearings serves more nearly the purpose of acting as a seal and a metal-protecting medium. The amount of lubricant used is very important, as it affects internal friction and power consumption. Leading manufacturers advise that, where oil is employed, *the housing should generally be filled to a level just sufficient to submerge half the surface of the lowest ball when the bearing is idle.*

The viscosity or body of the lubricant becomes a decided factor under high speeds, due to excessive churning and development of heat through internal friction. Under extremely high speeds wick-feed or sight-feed-drip oil lubrication have satisfactorily reduced churning and heat development. When grease is used, however, a somewhat greater amount is permissible, the housing being charged from one-quarter to one-half full. Use of greater quantity may lead to drag, temperature rise, and abnormal power consumption.

Grease, due to its self-sealing properties, is useful for any type of service where there is danger of contamination with dirt and moisture. Grease also can be very much more effectively retained in non-oil-tight housing. On the other hand, dirt or grit that finds its way into a grease-lubricated bearing does not settle out but usually becomes well mixed with the grease, forming an abrasive.

Roller Bearing Service

When a roller bearing is to be lubricated with oil much the same conditions apply as stated in connection with ball bearings. Where pressures or temperatures may be high, better lubrication will often result if somewhat heavier oils are used. Heavier oils for roller bearing lubrication should be chosen with the utmost care, after careful study of the bearing temperatures, for it is very possible to overestimate the conditions of operation. Then excessive drag may de-

velop. Where such bearings may be exposed to consistently high temperatures, pressure circulation of a comparatively fluid oil has been found to promote lower actual bearing temperatures. Where the oil acts directly as a coolant, it may in turn be cooled before recirculation.

In the grease-lubricated bearing but little cooling effect is developed by the grease itself. If the grease has been prepared to meet the operating conditions it will promote a uniform range of bearing temperatures by its ability to reduce friction, especially if it does not develop abnormal internal friction itself.

In most mills the selection of one reputable anti-friction-bearing grease will suffice. But in others, where the bearing temperatures run over 225° F., as in dyeing and finishing, a second grease must be selected to meet the high temperature conditions. As a general rule, a high temperature grease will create too much drag when used at low or room temperatures, therefore the necessity of two greases.

Cleaning and Flushing

To enable you to clean and flush ball or roller bearings easily, you will find that many such bearings have a drain plug at the bottom. When cleaning is necessary, unscrew the plug, flush the bearing, replace the plug, and relubricate. In an oil-lubricated bearing it is practicable to provide an arrangement of nipples and pipe fittings terminating in a sight-gauge glass. In this way not only is cleaning made easier but the oil level in the bearing can be observed.

Bearings should be flushed at periodic intervals, say once a year for the average operation. The frequency will depend upon the design of the bearing, the type of seal, the extent to which dust, lint, or water may be present, and the nature of the lubricant. You should use a light flushing oil for this purpose. Do not use gasoline or other solvents, for these would tend to dissolve the mineral oil content of any grease used, leaving a residue of insoluble soap.

This method just outlined is for bearings installed. Where the bearing is disassembled cleaning solvents can be used, if used with extreme care. Immediately after using, the bearing should be dipped in a light oil, to rinse off all solvent and prevent rusting. Always remember to relubricate immediately.

Pressure Grease Gun Operation

The grease gun is one of your most valuable tools. If it is carefully used, the bearings will remain in good condition. Textile machinery builders like the pressure grease gun for ball and roller bearing lubrication. That is why you have so many pressure fittings to service. These gadgets are very tight, so they keep out dirt and protect the bearings by retaining a grease charge without leakage.

Unfortunately, you can force too much grease into the bearing housing if the pressure gun is not carefully handled. Also, you can force in lint or dirt if each fitting is not wiped before using the gun. This may cause overheating, especially if the grease is too heavy. Such overheating is brought about by excessive internal friction within the lubricant itself, as stated before.

With certain types of grease, abnormal increase in temperature may make the grease so fluid or may so change its make-up that oil separates from the soap in the grease. This reduces the lubricating value of the grease and causes loss of oil by leakage if the bearing is not well sealed. To

prevent frequent greasing, some like to put plugs in the grease holes instead of pressure-gun fittings. They screw in the fitting only temporarily, at the regular time for relubrication. It is a safer idea, even though it takes a little more time.

Oil-Lubricated Electric Motors

In addition to motors running on ball or roller bearings you also have some sleeve-type Babbitt bearings that are lubricated by one of the following methods:

Ring Oilers. In a typical ring-oiled motor bearing the base is built as an oil container in which oil should be kept at a uniform level, as indicated by an oil gauge. On the shaft is suspended one or more rings, larger in diameter than the shaft. The lower portion of the ring dips into the oil in the reservoir; and when the shaft revolves oil is carried to the top by the revolving ring, from which point it flows into the oil-distributing grooves in the bearing. There is little change for oil to be wasted in a ring-oiled bearing, the design being such that the oil is returned to the reservoir continuously after it leaves the ends of the bearing.

Drop-Feed Oilers. A drop-feed oiler feeds a regular supply of oil to a bearing drop by drop. The number of drops per minute can be regulated very accurately. It feeds continuously.

Sight-Feed Oilers. Sight-feed oilers usually have a glass oil container; thus the oil level is always visible. There is an oil filling hole in the cover, a conical-pointed adjusting needle which controls the oil flow, a shut-off lever, by which the needle can be raised or lowered and the flow started or stopped, a sight-feed-observation glass, and a milled collar, the turning of which raises or lowers the needle, thereby increasing or decreasing the rate of oil flow. The sight-feed-drop oiler is advantageous in that the feed can be rapidly adjusted, started, or stopped and the oil level as well as the rate of flow can always be readily observed.

Bottle Oilers. Bottle oilers are automatic in action; the oil feed starting and stopping with the action of the shaft, upon which rests a metal spindle along which the oil flows. As bottle oilers show the level at any time, they should be kept clean.



Pictured here is Frazier M. Edwards of Raleigh, N. C., supervising engineer of the Texas Co., as he delivered the principal address at the annual Spring meeting of the Eastern Carolina Division of the Southern Textile Association at N. C. State College April 24. A. R. Marley of Durham, N. C., retiring division chairman and an official of the Erwin Cotton Mills Co., is shown on the right.

Wick Oilers. Wick-feed oiling was one of the earliest developments in automatic lubrication. The principle involves capillary action or a combination of capillary and siphon action. In the latter, one end of the wick is immersed in the oil reservoir, the other end being suspended in a siphon tube. This latter end is lower; therefore oil from the reservoir tends to siphon over and drip from the end of the wick to the rotating shaft. Another design locates the wick below but in actual contact with the shaft. This is called an up-feed capillary type. Wick or siphon oiling is automatic and regular, depending upon the oil level in the reservoir, the number of strands in the wick, the body or viscosity of the oil, and the depth to which the feeding end of the wick extends into the siphon tube. A very clean, highly refined oil of about 200 to 300 seconds SUV will adequately fill the requirements of most textile motors.

Variable-Speed Transmissions

There are several types of variable-speed transmissions. The most common is the Reeves drive, which is a good example of the "V-belt and flexible-chain-transmission group." Lubrication is generally limited to the bearings that support the pulleys, chains, or discs and take up the thrust developed by the lateral pressure of the belts against the discs which compose the pulleys. The presence of lubrication in the transmission case itself is objectionable and harmful. Ball bearings are generally employed in this type of unit, so the grease selected for ball and roller bearing lubrication fits into this picture suitably.

The geared motor is used where a limited range of selective speed changes may be required and where floor space and first cost are factors. The geared motor is well protected as to lubrication. Leakage of lubricant and entry of contaminating foreign matter can seldom occur. You only need to be sure that the lubricant or lubricants used are best suited to the design and the operating conditions. The motor is generally equipped with ball or roller bearings, and your anti-friction-bearing grease will be used in the motor bearings.

The reduction gearing in a geared motor is designed for oil lubrication. The oil is carried in the base of the gear case at a sufficient level to permit proper dipping of the lower gear, which should be about half-submerged. The proper oil level is usually marked on the outside of the unit.

A medium-heavy oil is usually required, ranging from 500 to 900 seconds SUV at 100° F. In actual practice we decide on the most suitable oil after careful consideration of the average motor temperatures and the extent to which heat will be transmitted to the gear case or developed therein. The cases should be cleaned and flushed periodically, depending on the type and service—generally on an annual basis.

Air Compressors

Never feed too much oil to air compressor cylinders. That is why the builders install mechanical force-feed oilers. These can be adjusted so that each feed delivers from two to three drops of compressor oil per minute. That is enough for the average-size textile compressor. Larger units require more.

Why is it so necessary to be careful in lubricating air compressors? Because there is a lot of heat developed when

air is compressed, and the compressed-air temperature is the one your oil must work under. The usual custom is to pick an oil which will be just heavy enough to keep a good seal on the piston rings or rotor vanes. Do not use ordinary or general-purpose machine oil in air compressor cylinders. A highly refined oil of about 300 to 500 seconds SUV at 100° F. that has an extremely low carbon content is most suitable.

If the oil is too thin the seal will be insufficient, which will result in leakage and high oil consumption. In turn, if it is too heavy it will be sluggish at intake temperatures, atomize incompletely, and be likely to hold any dust, dirt, or carbon in the cylinders. This will cause increased carbon deposits. When a compressor shows signs of poor compression most operators increase the oil feed. This is bad, for it usually leads to more carbon, stuck rings, or poorly-acting blades in rotary compressors.

Oilite Bearings

Mention is being made here of this particular type of bearing (oilite) because of its increased use in textile mills. In general applications they vary widely in size and adaptation. Extreme care should be exercised in the re-oiling of this bearing. An oil that is extremely clean from a refining angle, and that has a very low carbon content, meets two of the many required characteristics. An inferior oil will form carbon on the shaft side and glaze over the bearing surface, thereby preventing lubrication and causing rapid wear. There is a definite and detailed procedure for the boiling out and relubrication of these bearings after they have been used and the oil feed has for some reason ceased and they have to be removed.

Opening Room and Picker Room

A good general purpose oil should be selected for general usage in the mill. The viscosity is governed by the condition of the equipment. Generally an oil of from 300 to 500 seconds SUV at 100° F. is most suitable. As a general rule the opening room, with all its varied assortment of equipment, has only two types of bearings employed—the plain or sleeve-type of bearing, which is oil-lubricated with your general-purpose oil, and anti-friction bearings, which are lubricated with the ball and roller-bearing grease that has been selected for general plant usage.

What has just been stated as applying to the opening room also covers the picker room, with its varied machinery. These two departments are easily lubricated and provide no unusual problems. Some operators prefer to oil the gears in each of these departments with a general-purpose oil; others prefer to let them run dry, due to the oil creating a tendency to pick up lint and dust and holding it in the gears.

Card Room

The card involves a number of rollers and cylinders surfaced with card clothing. Dust and fly in the card room make it necessary to be very careful to protect lubricants against contamination. The construction and motion of the comb box of the card have always involved possible lubri-

cating problems. The doffer comb is vibrating continually. This motion is developed by a suitable cam or eccentric mechanism, which runs in a bath of lubricant and at a speed of from 900 to 1,500 r.p.m. The temperature of the oil must be as uniform as possible, even though these boxes operate at some 30 to 40° above room temperature.

This requirement has led to a consideration of a wide variety of lubricants, including both oils and greases, for comb boxes. Since the lubricant is subjected to the continued churning action of the cam or eccentric mechanism, temperature will be developed due to the resistance to motion. This is especially true in cotton carding service, where speeds are higher than in carding wool or worsted.

Lubricants which will readily follow the comb box elements, with minimum desistance to flow, will promote lower frictional temperatures and insure more positive maintenance of the desired clearance between the comb and the doffer cylinder.

The card clothing must be protected. With the necessity for uniformity of temperature in card lubrication, it is obvious that leakage or throwing of lubricant should always be prevented. If oil spots get on the backing of the card clothing it will deteriorate, and the sliver will also be oil-spotted. Increasing the body of the lubricant is a partial remedy but not to be recommended, due to the temperature effect. For this reason the lubricant should have sufficient body to withstand the pounding of the dauber and the thinning-down effect of high temperatures.

There is difference of opinion as to the lubricants to be used in comb boxes. Some prefer a straight mineral oil, about 300 seconds S., and others prefer a semi-fluid type. The factors entering into the choice between these two are the condition of the comb box, the type, the operating speeds, and the temperatures.

Cylinder bearings are both oil and grease lubricated in most instances. A good grease of heavy consistency is packed into the bearing cap, and general-purpose oil is added at regular intervals. The rest of the card is oil lubricated with the general purpose oil.

The drawing frames, speeders, roving frames, sliver lap machines, ribbon lap machines, combers, and the rest of the card-room machinery can be lubricated with the general



Shown here are the new officers of the S. T. A. Eastern Carolina Division. Left to right: E. C. Horner, assistant superintendent of J. M. Odell Mfg. Co. at Bynum, N. C., vice-chairman; G. E. Moore, superintendent of J. M. Odell, chairman; and J. R. Meikle, assistant superintendent of Patterson Mills Co., Roanoke Rapids, N. C. Named to the divisional board were J. P. Hughes, superintendent of Eno Cotton Mills at Hillsboro, N. C., and S. G. Riley, Jr., superintendent of Pilot Mills Co. at Raleigh.

purpose oil and the selected anti-friction-bearing grease, with the exception of the rolls, the saddles, and the compounds.

The compounds are of two general types, oil lubricated and grease lubricated. The grease lubricated type is equipped with fittings, and the anti-friction bearing grease is used. The oil type can be satisfactorily lubricated with the steam-cylinder oil in use in the plant.

Saddles, Top Rolls, Roll Stands, Etc.

Saddles, top rolls, and roll stands of drawing, roving, and spinning frames use a very small quantity of lubricants as compared with the other machines. But what is used must be sufficiently fluid and must possess adhesive characteristics that will positively prevent contamination of roll cots.

Saddles. The speeds and temperatures involved in the lubrication of the saddle present no particular problem; but the design, the frequency of application, the method of cleaning, and the cleaning intervals are very important. There are many different types of saddles, but generally they can be classified as "wick" or "wickless." The former type contains a wicking medium to transmit the lubricant from a small reservoir, which holds a few drops, to the bearing surface. The filtering action of the wick is most effective when a fairly fluid lubricant is used. Otherwise frequent cleaning will be necessary. An oil of around 900 seconds S. is excellent. The wickless type provides only a small hole in the bottom of the reservoir for the passage of the lubricant to the bearing surfaces. The rate of flow depends entirely on the body or viscosity of the lubricant. A somewhat heavier lubricant is generally used for this type of saddle. A "semi-fluid type" of lubricant is usually employed. Both types of saddles may be used in the same mill and even on the same frame. In that case the conditions should be considered and one lubricant selected which will do the best job for both types of saddles.

Top Rolls. The lubrication of top rolls presents a somewhat come complicated lubricating problem, due to the difference in design. They fall mainly into three classifications: (1) solid-boss rolls, (2) shell rolls, and (3) ball or needle bearing rolls. Each of these three types may carry a calfskin, cork, or synthetic cot; and it is most important in selecting the lubricant to prevent contamination of these cots, where the lubricant would come in direct contact with the stock being processed.

In lubricating the top rolls the application must be made sparingly, and the oiler should be cautious not to "string" the oil across the cot from one bearing to the other. This is one of the main causes of contamination. This same precaution should be taken in lubricating the mandrel of the shell rolls. The shells should be removed and the mandrel wiped with an oily rag or waste and the roll reassembled without undue handling. The anti-friction bearing roll must be disassembled and the anti-friction elements cleaned and relubricated.

The solid-boss and the shell rolls can be very satisfactorily lubricated with a fairly heavy "semi-fluid type" of oil or a heavy mineral oil of approximately 900 seconds S. The anti-friction bearing rolls should be lubricated very sparingly with the proper type of anti-friction bearing grease. This must have a very low torque, in order to prevent overloading. Some operators prefer vaseline for this application.

Roll Stands. Your roll stand bearings should be given

very careful attention. They are inaccessible and are very apt to accumulate lint or dust. This is why a clearly outlined standard procedure for overhauling and relubrication is advisable. How often to do this depends on the operating conditions. The lubricant in a roll stand bearing serves a double purpose: (1) As a lubricant, to prevent metal-to-metal contact, and (2) as a protective seal, to prevent entry of lint or dust into the bearing.

A similar condition exists in the lubrication of the bobbin and spindle gear-shaft bearings on the roving frame. After the roll stand bearings have been cleaned they should be packed with a high-quality, medium-consistency, lime-base grease, of a No. 2 or No. 3 consistency. After that the stands should be re-oiled with the selected roll and saddle lubricant at regular intervals.

Spindles

A spindle oil must do two jobs: (1) it must lubricate, so as to reduce frictional wear and keep power-consumption down, and (2) it must take up shock, to prevent vibration or hunting.

Just how the oil must behave to assure the best results is of interest. In years past low power consumption was the most talked-of factor in selecting a spindle oil. Mill men talked about it a lot, since it involved a sizable percentage of the entire amount of power consumed by the average mill. More recently spindle experts have found that other things, along with power consumption, have an influence upon the maximum production of quality yarns. These factors in a spindle oil involve: (1) resistance to atomization, (2) minimum increase in viscosity, (3) low corrosive tendency, and (4) ample film strength.

All are functions of what we oil men call the chemical stability of the oil. In other words, just as the modern spindle is designed to operate on an oil within a very definite viscosity range, according to speed, package weight, and traverse length, so must the oil in turn stay within this viscosity range without sludging or in any way changing its physical characteristics throughout the length of time it is in service.

Vibration is affected by speed. Spindle speeds in the modern spinning frame have been much increased in recent years. They used to be around 6,000 to 8,000 r. p. m. Now 10,000 r. p. m. is a good average in cotton mills, with 12,000 to 15,000 r. p. m. in the synthetic fiber mills.

The chance of vibration increases with the speed, and it may cause faulty spinning with an excess of end breakage. It is impracticable to design the spindle base and bolster so as to prevent vibration entirely, hence the spindle oil must serve as a shock absorber when any vibration occurs.

The surface finish is related to lubrication. Spindle lubrication is most effective when the contact surfaces of the spindles and bolsters are as perfect as possible. Spindles, being of high-grade steel, can be very accurately machined to just about a mirror finish. Bolsters are of cast iron, so they must be run in to form a suitable glaze. This will be helpful not only to proper lubrication but also to reduced wear. Unless this surface glaze is developed soon after the spindle assembly is put in operation vibration can not be effectively prevented.

A good spindle oil must be highly resistant to oxidation. Should oxidation occur in service, sludge may be formed

MAINTENANCE & ENGINEERING

which will interfere with the cushioning or shock-absorbing ability of the oil film and likewise the circulation of the oil in the base.

Fluidity and temperature difference. A spindle oil must also function with a minimum of drag, power, or friction losses. Otherwise uneven or irregular twist in the yarn may occur. This will be indicated by soft packages and very low breaking strength of the yarn, and also excessive end breakage.

High power consumption will be a warning of such a condition. Temperature difference also is a good indication. In fact, differences which may exist between the room temperature and the temperature of spindle bases is now accepted as the best indication of the lubricating and friction reducing ability of a spindle oil. The ideal would be to have absolutely no difference in temperature. But, as friction must occur, this is impossible.

Spindle oils will almost always operate at a temperature somewhat above that of the surrounding atmosphere. With a high-grade spindle oil this temperature difference may range from ten to 15°. The spindle manufacturer sets the correct viscosity for each type and gravity of spindle he makes. Follow his viscosity recommendations in procuring your oil, and be sure that it is the highest-quality oil available from your supplier.

Other than the spindle oil as just described, the plant general purpose oil and the anti-friction grease will adequately lubricate the bearings of this equipment. They are generally anti-friction, grease lubricated bearings and plain sleeve-type oil lubricated bearings. Some winders have special oil reservoirs in which an oil of turbine grade and light in viscosity is required.

Loom Service

In the lubrication of weaving machinery you must keep oil or grease from coming into contact with the yarn or goods. Oil stains may be very serious where costly fabrics are being manufactured. That is why some operators think that the less they lubricate the better. But this can be equally as costly, as it leads to excessive wear. Fortunately, the loom builders have realized all this and have come to your rescue with means of automatic lubrication and well-sealed anti-friction bearings.

In some mills each weaver is responsible for the lubrication, operation, and production of his own machine. Other mills consider it best practice to have the lubrication taken care of by loom fixers in charge of the section. Uniformity in application of lubricants is most important, and especially-trained employees should be responsible for this work. The design and construction of loom bearings, cams, and gears will guide you as to how often you should lubricate and how to do it.

For smaller sleeve bearings, a high-grade machine oil of about 300 seconds SUV at 100° F. will be suitable. The larger bearings, such as the crank and cam-shaft bearings, need a somewhat heavier lubricant. A good grade of semifluid lubricant will give the best results. Some crank and cam-shaft bearings are grease-lubricated. Use anti-friction bearing grease.

Gears, dobby chains, and cams also must be carefully lubricated to prevent dripping or throwing of the lubricant

onto the woven goods. A very adhesive grease is required, about a No. 2 consistency. This product will also be suitable for the pressure-gun lubrication if proper caution is exerted in the selection of the grease. Dobby heads are usually lubricated with a medium-viscosity oil or a high-grade semifluid lubricant. Regular and controlled lubrication is most essential. The oil should never be poured carelessly upon the working parts of a dobby, for it may splash or be thrown onto the goods. Here, again, don't over-lubricate.

Slashing and Dyehouse

The most important lubricating problem in this department will involve keeping oils from coming in contact with the goods. For this reason it is often customary to sacrifice lubricating efficiency to some extent, and many operators use heavier oils on certain bearings than would otherwise be necessary. Lubrication in this department can normally be carried on with four grades of lubricants: a steam cylinder oil, a general purpose oil, an anti-friction-bearing grease, and a gear lubricant.

Bearing lubrication should be carefully carried out, to prevent oil-stained goods. Cup or pressure-gun lubrication is usually customary on most dye house bearings. For this purpose a medium grade of grease is advisable. Certain of the dyeing reels and driving apparatus on the rinsing vats are motor driven, through chains or gearing. There is considerable possibility of the lubricant used on exposed gears or chains being thrown off onto the goods by centrifugal force. A high-grade adhesive type gear lubricant is well suited for this service. It should also be resistant to the customary dye house fumes. Be sure to apply it evenly and lightly to the gear teeth and chains; too much may result in dripping and throwing.

Storage and Handling of Products

In this connection, the location of the oil and grease storage house is of prime importance. It should be located as centrally as possible to trucking facilities, in order to save time and unnecessary handling and to provide easy access to various departments of the mill. Such a storage house should conform strictly to underwriters' specifications governing fire hazards.



Representatives of the textile industry in North Carolina and other sections of the Southeast are shown here as they listened to the proceedings of the Spring meeting of the Eastern Carolina Division of the Southern Textile Association at the N. C. State College School of Textiles.

The warehouse should be kept absolutely clean at all times, and any defective or leaky containers should be immediately removed and the contents repackaged. The storage house should be kept as near a constant temperature as possible, because changes in temperatures sometimes cause condensation to take place in containers, and contamination occurs.

Along with protective storage of lubricants, you must realize that careless handling also can lead to serious contamination. This can reduce the lubricating ability of an oil or grease before it is even put to work. A study of the methods and equipment for the efficient handling of lubricants is advisable.

In the distribution of lubricants from the oil house there often may be a chance for drip or contamination if care is not exercised. Then time may be lost, due to the need for cleaning up. So here we are dealing with a cleanliness and labor-saving problem.

The manner of distribution will generally depend upon the location and number of machines that are to be served. In any case, it will often be found advisable to supply individual departments with sufficient gallonage at a time, in order to reduce oil house labor and expense.

Where auxiliary storage in individual departments is to be maintained, the type of containers used is important. It is suggested that the product remain in the supplier's containers and that a barrel pump be used for withdrawal of oil to dispensing cans.

In this method you get a clean container every time the product is drawn from the warehouse, and any foreign matter finding its way into the container is discarded with the returning empty container. Each container, as it comes from your supplier, is clearly marked with the correct name of the product, which will insure proper application in the mill. If possible, it is advantageous to keep each department's products in a cabinet in the department. The cabinet will offer much protection from lint or foreign matter that might find its way into the lubricants.

The worst enemy to be dealt with in textile mills, as you well know, is the contamination of quality lubricating products due to lint, dust, and moisture. The blowing-down of machinery by air is necessary but you must admit is an evil as well, as in this process lint, dust, and moisture are forced into open oil holes, reservoirs, and exposed gears and bearings. Experience has shown that oiling should be done right after a blow-down. All lint and dust should be wiped off fittings or oil holes, to prevent as far as possible the entry of foreign matter into bearings.

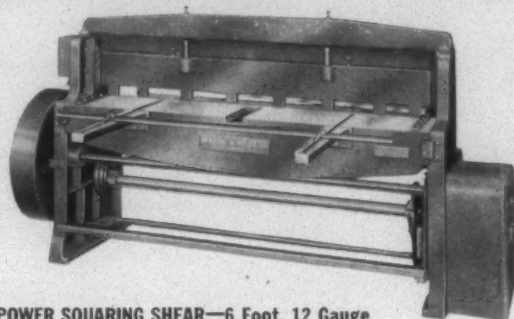
Grease is, as a general rule, received in drums, with the top or entire head coming off when opened. Extreme care should be exerted in keeping the top on when not using the drum for gun filling, etc. Always use clean instruments in removing grease from the drum. Extreme care should be taken when changing barrel pumps from one barrel to another, as the barrel pump retains approximately one quart of the last product pumped. Unless it is placed in a barrel of a like product, contamination will occur.

The whole story on storage and handling of oils and greases is simply to keep the products clean and free of contamination, so that when a product is applied it will be given a chance to do the work intended for it to do.

Mr. Edwards' address was delivered during the S. T. A. Eastern Carolina Division meeting at Raleigh, N. C., April 24.

REDUCE MAINTENANCE OVERHEAD

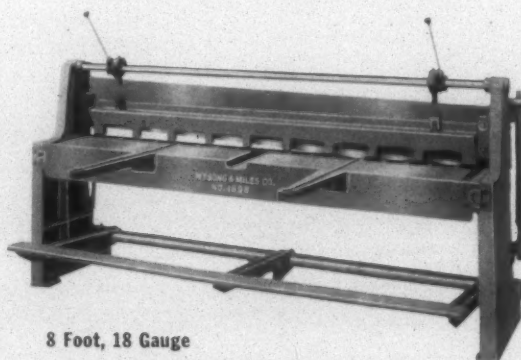
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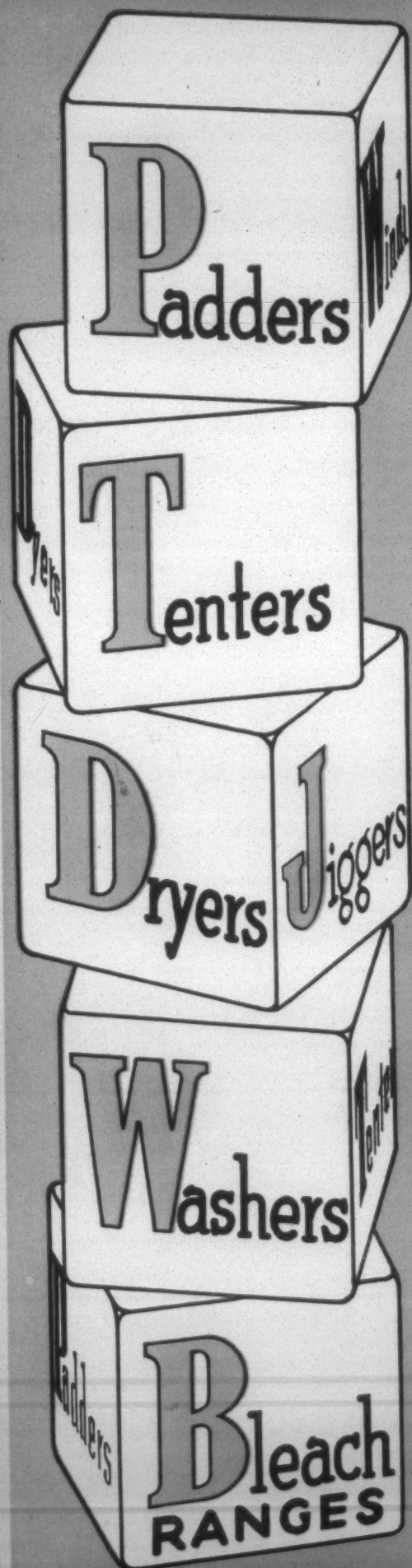
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Bleaching, Dyeing & Finishing

SCREEN PRINTING – Part Two

By FRANCIS TRIPP, B. Sc., M. S., Ch. E., Head of Chemistry Department, New Bedford (Mass.) Textile Institute

THE material that is to be printed is spread on the tables and the selvages securely pinned so as to prevent shifting during the actual printing operations. The printer then places the first screen over the fabric, as previously described, and the color paste is poured onto the screen along the edge nearest the operator. The paste is then carried back and forth across the surface of the screen by use of the squeegee, passing through the open mesh and registering on the surface of the fabric. Experience will tell how many times the color paste must be carried across the surface of the screen, in order to give the proper penetration of color into the material that is being printed.

The screen is then lifted and placed against the angle iron at the next stop and the procedure repeated. The operation is continued until the entire table is printed. The other color pastes are then applied in a similar manner from the remaining screens and the design becomes completed. The screens are washed immediately after printing so that the color pastes will not dry and fill up the open mesh of the screen.

Oftentimes the so-called "wax tables" are used in screen printing. The tables are covered with felt, duck, and successive layers of molten, amorphous wax. This wax must have good adhesive qualities, excellent tack and be able to readily release the cloth on pulling. Ten to 12 layers are necessary to produce a smooth surface.

There are many ways to apply the wax. In some instances plants make their own wax and apply it width-wise by means of a heated tank and spray arrangement, or by means of a perforated trough through which the wax flows on the surface. A doctor blade is used to level it off. It is then allowed to set and cool and is examined for holes which can be filled in manually. It is necessary to watch for indentations or channels in the wax surface, in order to guard against the color not being registered during the printing operation.

The cloth is rolled out on the table and the operators may use a yardstick or smooth rule to smooth or press the cloth to the adhesive surface. Pressure is applied in filling-wise direction, so that no wrinkles are evident and the cloth sticks to the table. These tables are advantageous in foulard tie printing or for printing twill fabrics of filament construction or those fabrics that in themselves are very shifty and tend to change in position during application of color.

No heat is used under this type of table. In foulard tie patterns, there is danger of flushing of the color or production of ragged edges with elimination of pattern detail, because of capillary action of the fibers in hot humid weather. A thickener of high solids content (Karaya gum) as an aid in the printing thickener will help overcome this

difficulty. It is also necessary to keep hygroscopic (glycerine) materials to a minimum. Excellent results have been achieved in this type of work using heavy bodied tragacanth paste (eight to nine per cent solids).

A variety of colors are applied to the fabrics, depending on the class of material used. All viscose rayon or Bemberg are generally printed with direct colors, because the brightness and the bloom of the colors prevent an attractive merchandise where wash fastness is of small concern. There have been some excellent tie patterns on all viscose or spun rayon and cotton using Rapidogen and Indigosol combinations of excellent brightness and good wash fastness.

Spun rayon and cotton fabrics are particularly attractive for Summer wash fabrics in the production of matching or complementary tie and shirt combinations where wash fastness is of paramount importance.

Acetate tie goods are generally of the foulard or jacquard construction. These are generally printed with dispersed type of acetate colors such as: Celliton (General Dyestuff Corp.) and S. R. A. (Celanese Corp. of America); Cibacete (Ciba Co.); and Acetamine (Du Pont Co.) These can be printed with a high soluble natural gum such as (Tragtex; Karaya) or a highly converted dextrin. In all cases the prime requisite being to produce a thickener, that can be removed by cold water, washing to eliminate any possibilities of loss of color and to insure a fabric of excellent softness. This would not be possible if printed with a gum of poor solubility such as starch.

Drying

After printing, the fabrics are lifted from the table and suspended in the air over sticks above the tables or attached to a rope on a pulley and suspended by this means in the air. Some of the more modern plants have even gone into artificial means of drying such as hot air chambers at the ends of the printing tables.

On the wax tables, there is oftentimes a light coating of the printing colors that have penetrated through the fabric and deposited on the wax surface. This necessitates washing the wax surface with a sponge or wet heavy netting dragged the length of the table by two operators, one on each side. Tables are sometimes sprayed and the color is floated to the surface of the wax and the excess water squeezed off. This eliminates danger of contamination of the subsequent colors on the next fabric to be printed. It is a general practice to print the light blotches first and build up to the darker blotches, so as to eliminate as much as possible this contamination of color.

In regards to direct colors on rayons and acetate colors on

acetate, after printing and drying, these colors are fixed by a steaming procedure, usually of 45 minutes to one hour duration. In general practice, the acetate colors are steamed with one to three pounds pressure or with no pressure, because of the tendency to dull the colors. In direct colors, six to ten pounds pressure is used.

There are several ways of preparing cloth for steaming. Generally, it is steamed in a cottage-type steamer, which is a cylindrical cast iron chamber, usually with a track running the length of the steamer, on which a wheeled frame that supports the individual cuts of the printed fabrics is conveyed. Some plants make so-called "bags" which are really elliptical rolls of about five feet in length, which are made by the reeling of the printed fabric in combination with a coarse crepe paper to prevent mark-off of color from the printed portion of the fabric to the unprinted portion during the steaming.

This bag is placed on a shell, which is connected by a chain drive to a mechanism within the steamer which in itself is connected to an outside drive, the end result being that the bag makes one complete revolution during the one hour steaming time. This eliminates the danger of bar marks or insufficient steaming in any particular localized part of the piece. The same apparatus can be used for the steaming of paper wrapped cylindrical rolls instead of the elliptical rolls mentioned above. This permits doubling the steaming capacity.

In other type steamers, the cylindrical rolls are suspended vertically by hooks rather than being placed horizontally on the frame rack as above. This vertical steaming apparatus has the greatest steaming capacity. After steaming, the goods are stripped of paper on a reeling machine and the printed fabrics are ready for the final washing and finishing operation.

Washing and finishing operations in most screen printing plants are held to a minimum. Flat goods can be rope washed or open washed, depending on the type of fabric and class of colors printed. Jersey fabrics must of necessity be washed in the rope form, for any tension placed on them will naturally result in a rope formation anyway.

Specifically, the direct and acetate colored prints are washed in the rope form. Usually a four to six-box rope soaper is used and is equipped with an overhead reel which is the propelling force for motivating the pieces through the various compartments of the washer. These particular colors are usually washed cold or with a very slightly elevated temperature in the second and third boxes, generally no higher than 100° F. A typical line-up of a four-box compartment would be: first box, water at 90° F.; second box, synthetic detergent or a sulfated alcohol at 90° F.; third box, cold water rinse; fourth box, cold water rinse.

In regard to direct colors, it is generally common practice to include in the last rinse one of several quarternary ammonium compounds, such as Ahcofix A (Arnold, Hoffman & Co.) which have dye-fixative as well as softening properties to enhance the final finish of the fabric. Cationic or anionic softeners may also be utilized in the last rinse as the final finishing operation prior to drying and tentering. When acetate colors are used, there is no need for a dye fixative in the last bath, as these are fully fixed in the steam-

ing. However, it is general practice to incorporate the cationic or anionic softeners in the last rinse under conditions mentioned above.

The pieces are then hydroextracted and opened, the ends sewed to make a continuous strand of about 1,000 to 1,500 yards and dried through a hurricane or a loop dryer, or any other type of drying equipment that is available.

In general practice, the air lay or hurricane dryer is much preferred for rayons and jerseys, particularly because of the desire to eliminate any tension on these fabrics which is detrimental to the final finish. However, it might be mentioned that strangely enough, some plants are successfully drying some of the finer rayons on drying cans generally by running the first two cans cold and by lapping them.

After drying, the goods are then taken to the tenter and framed to finished width. Generally, in the finer fabrics, this is accomplished with the aid of a steam spray which swells and opens up the fibers, resulting in the optimum softening of the printed fabric. This is generally the final finishing operation. The goods are then inspected, rolled, packed and shipped.

Rapidogens and Indigosols

The Rapidogen and Indigosol colors differ greatly from the direct and acetate applications principally because of the type of fabrics to which they are applied and also the fastness requirements of these particular colors. They have excellent fastness to washing and by selection of colors an excellent light fastness can be obtained. Rapidogen and Indigosol colors are generally made by using a tragacanth base thickener. There is an increasing tendency today to go into the alginate type of thickener as well as the synthetic cellulose type as (Colloresine—General Dyestuff Corp.)

In screen printing, it is generally not good practice to use a starch paste, because of the difficulty of the removal of the starch on account of the heavy film of color paste that is applied in screen printing. This same precaution would not be necessary in roller printing, where the application is so physically different.

The Rapidogen colors are solubilized in an alkaline solution, generally, with the aid of an alcohol or a cellosolve. The Indigosols are actually solubilized vat dyestuffs and require merely water and cellosolve or diethylene glycol for solubilizing. In regard to the Indigosols, there are many different formulae for preparing them, depending on the means of development available. The simplest method is to print them in conjunction with the Rapidogens, using neutral chromate of soda as an oxidizing agent in the print paste for the Indigosols.

These are acid aged by passing through the orthodox plant acid-ager into which is injected a mixture of acetic and formic acid vapors. This develops the Rapidogens and partially develops the Indigosols. The colors, particularly, the Indigosols are further developed by a passage of from three to ten seconds in a sulphuric acid bath (5° Tw.) with a one-half-ounce per gallon of neutral chromate of soda, generally at 145° F. They are rinsed well and given a good hot soaping for development of final bloom, rinsed, hydroextracted, dried and framed. There may be subsequent finishing operations, such as calendering, decatizing, sanforizing and glazing, depending upon the fabric and the results desired.

There are also many and varied formulations for the de-

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velopment of the Indigosol colors without resorting to the acid-chrome development bath as described above. This entails the use of the proper oxidizing agent such as sodium chlorate, sodium nitrite or sodium bichromate, formulae for which there are many available in the literature. The formulae and preparation of some of the typical colors are listed below.

DIRECT COLORS

To 56-64 oz. of thickener, add 800 Gms. of Urea. Add the solution of color and water made up in the following quantities:

X gms. Direct Dyestuff (depending on shade desired)

4.0 oz. Cellosolve

59.5 oz. Hot Water

Stir well to insure solution. It is sometimes advisable to apply heat to insure solution either by means of a steam pipe (caution here) or by a hot plate. Add, finally, one-half ounce of screen penetrant (pine oil base product). This acts as a combination penetrating agent or anti-foaming agent.

ACETATE COLORS

The acetate colors are generally the dispersed type which have a dispersing agent incorporated in the dye powder. It is generally good practice to paste or disperse the powders in glycerine (four oz./gal.) and hot water. Strain into the thickener. Some acetate colors are greatly aided in solution by the use of commercial dispersing agents (Durit X). It is also being found that it is increasingly beneficial to add surface active agents as an aid to wetting out of the dyestuff and as a further aid in the penetration of the printed fabrics.

A typical formula for a Navy Blue is as follows:

84 gms. Celliton Blue G. A.

6 gms. Celliton Yellow G. A.

14 gms. Celliton Red R. E.

Disperse in five ounces of glycerine and 58 ounces of hot water. Strain into 64 ounces of thickener, alginate, karaya, or tragacanth). Add one ounce per gallon of turpentine as an aid to lubrication and to prevent foaming.

INDIGOSOL BLUE (Three oz./gal.)

48 oz. Indigosol Blue 04B

3 $\frac{3}{4}$ gals. Water

3 pints Diethylene Glycol

Fine strain into 12 $\frac{3}{8}$ gals. thickener. Add $\frac{3}{4}$ gal. neutral chromate of soda (four lbs./gal. standard).

6 pints Sightner Blue (Carbic Blue 906).

1 pint Turpentine

Make to 16 gallons. This requires acid aging and hot developing in chrome and sulphuric acid bath as described previously.

RAPIDOGEN COLOR (Three oz./gal.)

48 oz. Rapidogen Red G. S.

32 oz. Alcohol

48 oz. Sodium Hydroxide (76° Tw.)

3 gals. Hot Water

Boil to solution, fine strain into 10 $\frac{1}{2}$ to 12 gallons of thickener. Bring to 16 gallons with paste or water, depend-

ing on viscosity desired. Print, dry, acid age, wash, hot soap or detergent, rinse, dry, finish.

Program To Boost Cotton In Coated Fabrics

A four-point program to strengthen cotton's markets in the coated fabrics industry was announced recently by the National Cotton Council, Memphis, Tenn. Currently, the coating industry is consuming cotton fabrics at the rate of more than 500,000,000 yards annually. The Cotton Council's recommendations were outlined in a special study titled "Cotton in Coated Fabrics," which was conducted by the organization's technical services section.

Recommendations in the study include: research studies directed toward enhanced quality in fabrics for coating; a close working relationship with the coating industry; adoption of standards of quality construction; and utilization of sales promotion opportunities in exploiting the superior qualities of coated cotton fabrics.

Council researchers who conducted the survey said that cotton's adaptability to coating has been responsible for the preference of cotton fabrics in the majority of coating uses. During the study which carried the cotton technicians to coated fabric manufacturers, testing laboratories, and textile mills in ten states, the Cotton Council studied the principal types of coated cotton fabrics, and their quality advantages compared with those of competing materials. Special attention was given to such competitors as unsupported film and sheeting and some continuous filament synthetics.

Copies of the study are being distributed to cotton spinning and textile mills across the country and to key research and technical leaders in the textile field.



The Maid of Cotton, Matilda Nail, learns about cotton fashions in tires while visiting the rubber capital of the world. H. D. Tompkins, vice-president in charge of sales for Firestone Tire and Rubber Co., explains that the rubber industry is the largest single user of cotton in the United States and shows Miss Nail how cotton cord fabric is used in the plies of Firestone tires.



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More than 200 manufacturers of textile machinery, equipment, accessories, building, operating and office supplies, primary and fabricating materials, and parts, will have displays. This will mark the first meeting in Textile Hall of mill men and machinery and equipment manufacturers since 1941. There will be shown not only standard products, but some new ones developed in the last seven years.

Through our Reservations Committee all who attend the Exposition may obtain comfortable quarters. Address letters to Textile Hall Corporation, Greenville, S. C.

Note: This Exposition is exclusively for the textile industry, and is open only to those holding admission tickets. Because of limited aisle areas, children under sixteen years of age cannot be admitted at any time.

ROCK HILL, S. C.—Construction of a two-story, \$150,000 addition at Arcade Cotton Mills will begin as soon as materials become available. The addition will join the present plant at the northwest corner and will house looms and carding machines. Officials state that the addition probably will not result in the hiring of more employees as new machines will be put into use to ease bottlenecks in production. Several streets in the mill village are being paved and all houses are being painted on the outside.

COLUMBUS, GA.—A Lixator for making clear, saturated brine from rock salt recently has been installed at the Georgia Mfg. Co. plant here. The Lixator is located on a balcony in the raw stock dye house and the rock salt is stored on the floor above and feeds automatically into the hopper, flowing by gravity into the Lixator dissolving tank beneath the hopper.

MCCORMICK, S. C.—Announcement of additions to cost more than \$1,000,000 to the Deering, Milliken & Co. worsted mills at McCormick and Johnston, S. C., was made recently by Roger Milliken, president. "Because of the splendid spirit of co-operation that has existed between labor and management at McCormick and Johnston since our plants were opened there last year, our company has authorized an increase in both plants of approximately 25 per cent," Mr. Milliken declared. Work is to begin immediately by Daniel Construction Co., Greenville, S. C., and is expected to be completed this Fall.

YORK, S. C.—A \$300,000 addition is under construction at the No. 1 Plant of York Mills, Inc. The new structure will house new long draft carding and spinning machinery which is expected to be installed and in operation in November or December.

GREENVILLE, S. C.—Contract has been awarded for construction of a warehouse at the local plant of Woodside Mills. Cost of the proposed structure was not announced.

COLUMBIA, S. C.—Columbia Mills has received a building permit for construction of concrete, steel and brick loading platforms to cost approximately \$50,000.

CHARLOTTE, N. C.—The Spatex Corp., incorporated in Delaware, has purchased the Hoskins Plant of Textron Southern, Inc., for \$600,000 and possibly other considerations. Announcement of the purchase had previously been reported, but the purchase price was unknown at that time. Spatex officials indicate that a modernization program will be started in the Hoskins Plant when the changeover becomes effective in September.

WAKE FOREST, N. C.—Royal Cotton Mill Co. is adding 3,168 spinning spindles and 1,920 twisting spindles, it is reported. The new machinery consists of 11 spinning frames of 288 spindles each, 3¾-inch gauge, 2¼-inch rings, and eight dry twisters, each

having 240 spindles, 4½-inch gauge and three-inch rings. Plans also call for future installation of 12 five-roll high-draft slubbers.

KNOXVILLE, TENN.—Plans have been announced by Cherokee Textile Mills to spend about \$200,000 for modernization and improvements, including installation of additional equipment.

PROVIDENCE, R. I.—Textron, Inc., has purchased all assets of Esmond Mills, Inc., according to President Royal Little of Textron, Inc., with the purchase price said to be 139,508 shares of the latter company, \$1.25 convertible preferred shares, estimated payment for the assets being close to \$3 millions. Textron, Inc., assumes all Esmond liabilities and acquires control of all the common stock of the Esmond subsidiaries, including Esmond-Virginia, Inc., Clarence Whitman & Sons, Esmond Mills, Ltd., and Esmond Mills (Ontario). Esmond has mills at Esmond, R. I., Waynesboro, Va., Dover, N. H., Granby, Que., and Perth, Ont., in Canada. It is reported that Textron intends to operate substantially as at present the Esmond plants in Virginia and Canada and that the Rhode Island and Dover properties will be sold. In Textron's application for listing on the New York Stock Exchange of the stock with which it will pay for Esmond, it was disclosed that the new Textron plant at Belton, S. C., which will make rayon crepe fabrics, will be equipped with 120 wide looms.

GREENSBORO, N. C.—Initial construction is underway on a \$100,000 office addition at Cone Mills Corp. The addition will be three stories high, of brick construction, and will link present quarters with the operating office next door. It is reported that work is underway on an opener room adjacent to the picker building at Cone's White Oak Plant. It will contain 24 cotton openers of the company's own design.

HIGH POINT, N. C.—A new addition to High Point Weaving Co., a subsidiary of Burlington Mills Corp., is now under construction and is expected to be completed this Fall. The addition will extend 178 feet and will serve as a supplement to the weaving room. The annex will house 132 additional looms and about 50 new employees will be required.

DANVILLE, VA.—Directors of Dan River Mills, Inc., at a meeting June 12, declared two dividends, each payable July 1 to shareholders of record as of June 18. A 25 cents per share dividend was ordered on the common stock, this totaling \$375,000 and a dividend of \$1.12½ on the preferred stock was ordered, this totaling \$56,250.

CHARLOTTE, N. C.—The 14 plants comprising the Johnston group of textile interests, headed by R. Horace Johnston of Charlotte as president, are being modernized and expanded at a cost estimated at \$5,000,000. Plants operated by Mr. Johnston include Highland Park Mfg. Co. at Charlotte and

Rock Hill, S. C.; Johnston Mfg. Co., Charlotte; Anchor Mills Co., Huntersville, N. C.; Eastern Mfg. Co., Selma, N. C.; Monroe Mills Co. and Union Mills Co., Monroe, N. C.; Park Yarn Mills Co., Kings Mountain, N. C.; Worth Spinning Co., Stony Point, N. C.; Spinners Processing Co., Spindale, N. C.; and Roberto Mfg. Co. and Brown Mfg. Co., Concord, N. C.

ICARD, N. C.—Bids were received June 16 for construction of a braider building and office building here for Icard Cordage Mfg. Co., producer of cotton braided sash cord and clothes lines.

HARTWELL, GA.—Royal Little, president of Textron Incorporated, at ceremonies June 3, broke ground for the \$2,500,000 rayon weaving plant to be erected here for Textron. The plant, being constructed by Daniel Construction Co. of Greenville, S. C., will employ about 300 persons when completed and in operation.

DURHAM, N. C.—Wake Mfg. Co. has been chartered by the secretary of state, authorized to deal in textiles with a capital stock of 1,000 shares, no par value. Five shares were subscribed by Nathaniel Smith, Jr., of New Canaan, Conn., David Hammell of Sparta, N. J., and F. L. Fuller, Jr., of Durham.

ELKIN, N. C.—Five hundred persons were in attendance at an employer-employee banquet and dance sponsored by Chatham Mfg. Co. June 4, the first event of its nature held in nine years. Thurmond Chatham, chairman of the board, addressed the group during the banquet.

SPINDALE, N. C.—Five local textile plants: Elmore Corp., Sterling Hosiery Mills, Stonecutter Mills Corp., Spindale Mills and Spinners Processing Co., have contributed \$102,000 to the city to remodel, enlarge and improve the Spindale Recreation Center.

COLUMBUS, N. C.—Plans have been announced for an addition to Columbus Mills which will double the capacity of the plant. The firm, in operation three years, produces narrow gauge fabrics and garment labels of cloth and other goods.

GASTONIA, N. C.—Delaine Worsted Mills, Inc., has been chartered to deal in textile fabrics. Authorized capital stock is \$130,000 and 150 shares of no par value with 150 shares subscribed by Milton Tager of Gastonia and Sidney Tager and Ralph Tager, both of New York City.

LEAKSVILLE, N. C.—Because of the decrease in the demand for high-priced bedspreads, Fieldcrest Mills recently discontinued the manufacture of embroidered bedspreads and closed down the plant at Leaksville. About 60 employees were used at the plant and they were offered jobs in the company's other mills.

ROBBINS, N. C.—Contracts have been awarded for expansions of the Robbins

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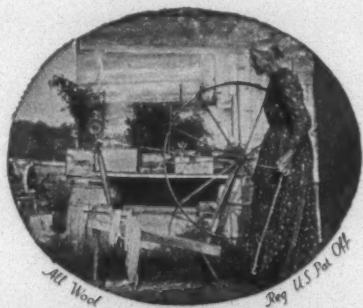
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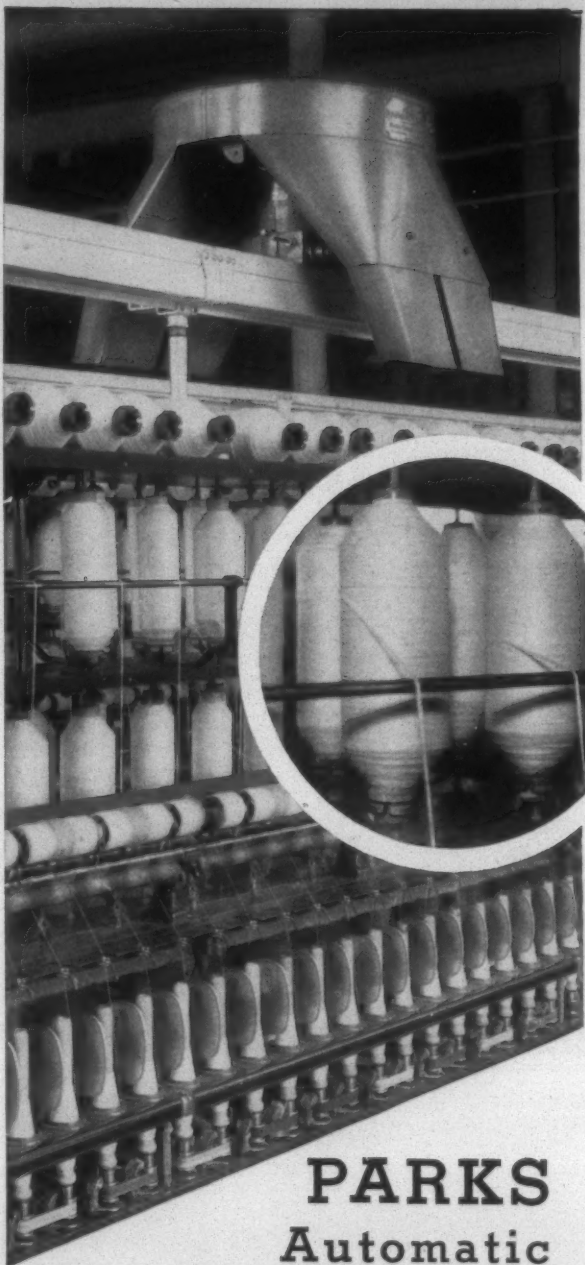
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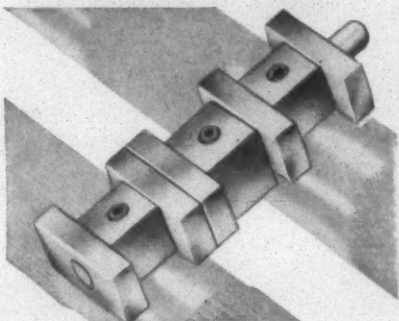
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MILL NEWS

Cloth Mills plant here. An additional 25,000 square feet will be added to the cloth and weave rooms as well as an enlargement of the general offices. It is reported that the new Aberdeen, N. C., plant of the firm is nearing completion and that operations of certain units there will begin in August.

LANCASTER, S. C.—Finals of the "Miss Springmaid of 1948" contest conducted by Springs Cotton Mills will be held July 24. Contestants will be selected from the seven Springs plants and the judges will select the winner who will best typify the famous Springmaid on the trade-mark of the Springs Cotton Mills. The winner will be given a trip to New York City with all expenses paid and will have her portrait painted by a famous artist.

KINGS MOUNTAIN, N. C.—Contract has been awarded for construction of a two-story addition at Park Yarn Mills Co. Cost of the proposed addition was not stated.

BOILING SPRINGS, N. C.—Weavers Spinning, Inc., has been chartered to operate mills and factories. Authorized capital stock is \$100,000 with \$300 stock subscribed by James Riley and J. R. Davis of Kings Mountain, N. C., and Robert Spilman of Shelby, N. C.

RUTHERFORDTON, N. C.—Initial construction is underway on a plant for Laurel Hill Corp. which will manufacture rayon and cotton fabrics. The building will be of concrete, brick and steel and will be air cooled. It is hoped the plant will be in operation by early Fall.

ERWIN, N. C.—A new building to house 164 more looms is to be constructed at Erwin Cotton Mills Co. here. This is part of an expansion program now underway by the company, which has also recently added two entire new plants to its system.

LAURENS, S. C.—About 80 employees of Laurens Mills were awarded service pins recently at a banquet sponsored by the mill management. W. M. McLaurine, former secretary of the American Cotton Manufacturers Association, was the principal speaker at the event and presentation of the pins was made by N. G. Hardie, general manager.

ANDERSON, S. C.—Textron Southern, Inc., will center its future Southern operations in the Anderson area, Royal Little, president, stated in a luncheon address before the Anderson Rotary Club June 1. He said the firm's decision to make Anderson the center of its Southern operations followed surveys in several Southern states.

GREENVILLE, S. C.—Brookline Fabrics, Inc., has obtained a charter from the secretary of state to manufacture and sell fabrics. Authorized capital stock is \$325,000. George A. Buckley is president.

GREENVILLE, S. C.—Directors of Brandon Corp. at a recent meeting voted to recall the five per cent preferred stock as of July 1 at par value of \$25 plus accrued dividends as of date of call. Officials did not reveal the amount of five per cent preferred stock outstanding nor the amount of the accrued dividends.

CAMDEN, S. C.—A three-story addition currently under construction at Hermitage Cotton Mills will double the capacity of the plant when completed. The new addition will result in the installation of 300 more looms and 16,000 additional spindles, bringing the total number of looms in the mill to 760 and spindles to 38,000. Company officials believe it will take about a year to complete the construction work since all labor used is from the ranks of mill employees.

GREER, S. C.—The Greer unit of Victor-Monaghan Co., Greenville, S. C., dedicated its new baseball field, "Glenn Field," May 26. The baseball park is named after T. J. Glenn, superintendent at Greer.

SYLACAUGA, ALA.—A new approach in strengthening the basis of personnel of the future is indicated in one of the latest programs adopted at Avondale Mills. In addition to employing its share of textile school graduates, Avondale during the past several months has employed about 25 non-textile graduates. The new Avondale policy is to engage graduates in chemical engineering, industrial engineering, mechanical and civil engineering, and, with the thought of injecting a fresh approach into the industry, to engage commerce school graduates with the viewpoint of specializing in cost, time study, job load and similar work.

STONEWALL, MISS.—Acquisition of the physical properties of the Stonewall Cotton Mill by Erwin Cotton Mills Co. of Durham, N. C., was announced recently by W. E. Huger, partner of Courts & Co., Atlanta investment bankers. Price of the sale was not disclosed. William H. Ruffin, president and treasurer of Erwin Cotton Mills Co., said extensive modernization of the Stonewall properties would start immediately. In this connection, he said considerable new machinery will be installed. Acquisition of Stonewall properties increases Erwin's spindles to approximately 220,000. The company operates seven mills and two finishing plants in North Carolina. Headquarters are in Durham. Stonewall Mills now employ approximately 750 persons, and manufactures a diversified line of colored goods. The mill has approximately 23,400 spindles, 700 looms, and a dye plant. The mill village comprises 215 houses. Installation of new equipment will proceed as rapidly as possible without interrupting normal operation too greatly, Ruffin also stated. M. Ray Harden, who has been superintendent of the company's No. 4 Plant in Durham, is being transferred to Stonewall as manager.

TARPON SPRINGS, FLA.—Agreement to furnish land free of taxes for the construction of a new woolen mill in Tarpon Springs was reached recently during a joint session of the Chamber of Commerce and Board of City Commissioners. No further details were announced.

STANLEY, N. C.—A fire which swept the Stanley Mills, Inc., warehouse May 23 caused \$60,000 damage in new textile machinery and to the building itself. General Manager H. G. Rollins, who gave the damage estimate, said the loss is covered by insurance. A subsidiary of J. P. Stevens & Co., the firm produces spun rayon yarns and blends and worsted yarns.

NITRO, W. VA.—W. Lee Stephens, president of the Foremen's Club of the Nitro plant of American Viscose Corp., presented a \$100 scholarship to John Knight, Nitro high school senior, at the school's annual awards assembly for writing the best essay on "How Education Can Help My Future in Industry." The contest, sponsored by the Foremen's Club, was open to all seniors of the Nitro school. Essays were 500 words or less.

NEWNAN, GA.—Construction has been started on a one-story, brick and steel buildings to house the newly-organized Brooks Spinning Co. The mill, which is scheduled to open within a year, will concentrate on quality yarns utilizing 2,000 spindles and employing about 50 persons. G. R. Brooks, Sr., will serve as president and treasurer and his son, G. R. Brooks, Jr., as vice-president and assistant treasurer.

COLUMBUS, GA.—Jordan Mills, Inc., during the past year has replaced old equipment with more than \$100,000 worth of new machinery. The firm employs about 700 persons in the manufacture of upholstery and cotton socks.

SLOCOMB, ALA.—Local citizens have offered a building site, and pledged funds for a building on the plot, in an effort to bring a textile mill here from New England. The name of the firm has not been revealed but it is said to employ about 3,000 persons with a weekly payroll of from \$75,000 to \$125,000.

OPP, ALA.—Eighty-six employees of Opp and Nicolas cotton mills here, whose length of service ranged from ten to 25 years, recently were awarded new service emblems of distinctive design. Eight employees with 25 years of continuous service received gold emblems with diamond insets.

PAW CREEK, N. C.—Plans have been announced by the Kendall Co. for immediate construction of a community house 70 by 50 feet for employees of its Thrift Plant.

GREENSBORO, N. C.—As a fire protection measure, Cone Mills Corp. is building two 150,000-gallon elevated steel water tanks in the northeastern section of the city. Cost of the project is estimated at about \$80,000.

NEW ORLEANS, LA.—Dr. Pedro Daniel Baridon, official of the Lanatur wool processing industries in Montevideo, Uruguay, was in New Orleans recently and in conjunction with a foreign trade zone committee, studied the possibilities of erecting a wool processing plant in the New Orleans foreign trade zone.

SHELBY, N. C.—Eighty-five homes and nearly as many vacant lots are to be offered to sale to employees of Lily Mills Co. Each home and vacant lot will be individually appraised and offered on a down payment of ten per cent of the purchase price, the balance to be paid through periodic payroll deductions over a period of six years.

COLUMBUS, GA.—A \$50,000 picker room addition has just been completed at Swift Spinning Mills, Inc., here. Approximately \$40,000 in new equipment has been installed in the addition as part of the company's policy to keep the plant up to date.



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profitable production depends
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Pioneer Heddles and Reeds is a
gratifying assurance of peak output
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Our mill-experienced repre-
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with your organization
in assisting to
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at a maximum.

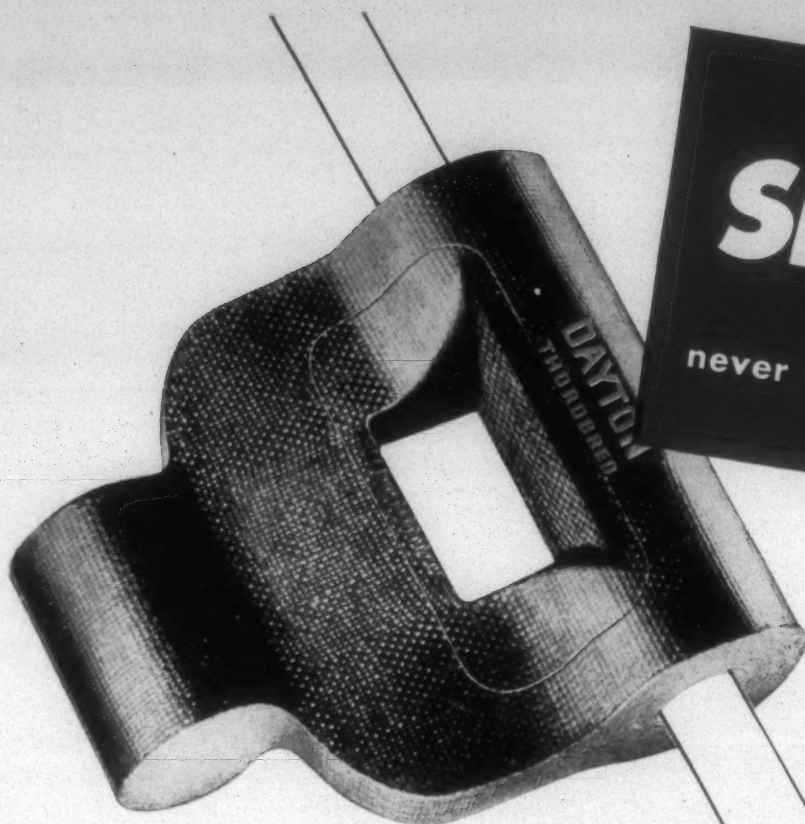


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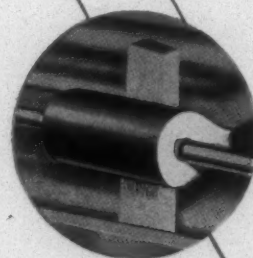


**Spindle
Hole**
never wears egg-shaped

The bearing surface of Dayton Reversible Drop-Box Pickers is "built in" with specially compounded rubber that is extremely hard . . . will never wear egg-shaped and requires no lubrication. Dayton Pickers are scientifically designed, carefully built, to take a terrific beating from high-speed looms, and to give better, more accurate shuttle contact for a longer time than other type pickers. Manufactured under specially engineered "3-Point Density Control" specifications, Dayton Reversible Drop-Box Pickers, last longer, give cleaner, faster production. Available in varied sizes, or Daytons can be tailored to meet your specifications. If they aren't standard equipment in your weave room it will pay you to get the facts. Write today to Dayton Rubber, Dayton, Ohio or Textile Division —Main Sales Office: Woodside Bldg., Greenville, S. C.

Reasons Dayton Reversible Drop-Box Pickers Save Time and Money

- 1. Hard at the Spindle Hole.** A hard composition bearing surface is "built in" around the spindle hole of Dayton Pickers. They won't wear egg-shaped and no lubrication is required.
- 2. Soft Around Picker Stick Hole.** The exact amount of cushion is provided at the picker stick contact point to absorb the terrific impacts. Less wear on the stick and longer life for the picker.
- 3. Still Softer at Shuttle Contact.** A still softer composition is used at the shuttle contact point. This eliminates shuttle point loosening, helps assure a perfect throw throughout the life of the picker.



Dayton Rubber

PERSONAL NEWS

Vincent J. Columbo, formerly athletic director of the Bladenboro, N. C., public schools, has been appointed director of welfare and recreation at Bladenboro Cotton Mills.

Clifford O. Morgan, superintendent of the Woodlawn and Rush plants of American Yarn & Processing Co., Mount Holly, N. C., has been elected president of the Mount Holly Rotary Club for the ensuing year.

David S. Ball has been appointed purchasing agent for Harden Mfg. Co., Gastonia, N. C., and is being transferred from Rock Hill, S. C., to the company's main office in Gastonia. Mr. Ball succeeds Robert H. Hood, who resigned to become associated with Keesee Belting Co., Inc.

John D. Rollins has resigned as quality control manager at Borden Mills, Inc., Kingsport, Tenn., and is now associated with Industrial Tape Corp. as a sales research representative covering the two Carolinas. Mr. Rollins at present is located at 411 McKay Street, Laurinburg, N. C.

Charles B. Vose has been elected president of the New York Cotton Exchange. Mr. Vose succeeds Gustave I. Tolson, who was elected to the board of managers.

Marion W. Word, formerly connected with Sears Roebuck & Co., is now associated with J. W. Davis Manufacturers' Agency, Columbus, Ga., agents of textile supplies and equipment for the textile trade of Georgia, Alabama, Tennessee and Mississippi.

Andrew Christenson, since 1945 director of recreation at Dan River Mills, Danville, Va., has resigned from that post to enter the insurance field in Danville.

Robert R. West has resigned as president of Esmond Mills, recently acquired by the Textron organization. Mr. West previously had been president of Dan River Mills, Danville, Va.

John D. Bowen, a veteran of 19 years in the textile industry and formerly president and treasurer of the Stead & Miller Co. unit at Concord, N. C., has joined Wolf & Co., Philadelphia, Pa., certified public accountants and management consultants.

C. R. Palmer, president of Cluett, Peabody & Co., Inc., since July, 1929, will retire Oct. 1, in accordance with the company's retirement plan. . . . Mr. Palmer will be succeeded by Barry T. Leithhead, who is now vice-president in charge of sales. . . . E. C. Pfeffer, vice-president, and until re-

cently head of sales and merchandising, will retire Feb. 1, 1949, also in accordance with the firm's retirement program. Both Mr. Palmer and Mr. Pfeffer will continue as directors.

W. B. Thomas, formerly with Pacific Mills at Columbia, S. C., is now superintendent of Gold-Tex Fabric Corp., Rock Hill, S. C. . . . John H. Byram is now purchasing agent and personnel director at Gold-Tex.

Herbert Eastwood, formerly connected with Canadian Industries, Ltd., has been appointed Canadian textile chemicals representative for Rohm & Haas Co. of Canada, Ltd.



Charles R. Ibach, Jr., of Charlotte, N. C., left, a recent graduate of the textile school of North Carolina State College, has accepted a position as sales representative with Oliver D. Landis, Inc., of Charlotte. From 1939 to 1942

Mr. Ibach was employed by the Southwestern Bell Telephone Co. at St. Louis, Mo. During the war he entered the Naval Air Corps and served as a pilot in the Pacific theatre. At N. C. State College he was president of Eta Chapter of Phi Psi fraternity, a member of Phi Kappa Phi national honorary fraternity and a member of Sigma Chi. Oliver D. Landis, Inc., is agent for several well known lines of textile mill equipment and supplies, including the Keller roll picker and Chatham slasher cloths. For the latter product they are exclusive agents in the United States.

John M. Hamrick, secretary of the Alma and Musgrove Mills of Gaffney, S. C., was elected a national vice-president of the Junior Chamber of Commerce of the United States at the organization's 26th annual convention in Philadelphia recently. One of ten vice-presidents chosen, Mr. Hamrick represents five Southern states.

Edmund G. Robinson, general manager of the organic chemicals department, E. I. du Pont de Nemours & Co., Inc., since 1929, will retire from active company service July 1. He will be succeeded by John F. Daley, general manager of the pigments department. Mr. Robinson will continue as a member of the company's board of directors. . . . Ernest R. Cathcart, veteran manager of the Du Pont coated fabrics plant at Fairfield, Conn., has been appointed staff

advisor to the company's Fabrics Division management. . . . Harry J. Jenemann, former assistant manager of the Du Pont plant at Newburg, N. Y., was made manager of the Fairfield plant; succeeding Mr. Cathcart. . . . Charles C. Quenelle, former production superintendent at Newburg, was made assistant plant manager at Newburg, succeeding Mr. Jenemann.

W. E. Jones, vice-president of Scranton Lace Co., New York, and R. S. Bass, treasurer of A. E. Staley Mfg. Co., Decatur, Ill., have been elected vice-presidents of marketing and insurance, respectively, of the American Management Association.

W. B. Weaver of Fieldcrest Mills, Spray, N. C., has been elected president of the Tri-County Co-ordinating Council, civic organization representing Spray, Leaksville and Draper, N. C.

Rueben H. Brown, after 48 years service with Bemis Bro. Bag Co., has announced his retirement as manager of the New Orleans, La., plant of the firm to be effective July 1. Mr. Brown will continue with the firm for several more years, however, as special representative. He will be succeeded as manager at New Orleans by H. J. Wehrenbrecht, who has been assistant manager there since 1943.

Jack Neal Jolly and Bill Loftin, recent graduates of Mount Holly (N. C.) High School, have been named as the first recipients of all-expense, four-year scholarships to the textile school at North Carolina State College awarded by the R. S. Dickson Foundation. Mr. Dickson is president of the American Yarn & Processing Co. at Mount Holly.

Thurmond Chatham, chairman of the board of Chatham Mfg. Co., Elkin, N. C., has won the North Carolina fifth district's Democratic nomination for its seat in the United States House of Representatives. Mr. Chatham will be opposed in the November general elections by Tucker Day, Republican, Walkerton, N. C., but his nomination on the Democratic ticket is considered tantamount to election.

Benjamin B. Tunick has been elected president of Fibre Industries, Inc., 298 Fifth Avenue, New York City.

W. C. Harris, vice-president and manager of the apparel fabrics division of Mooresville (N. C.) Mills, has been appointed general sales manager of all product lines of the company. Mr. Harris, whose new duties will encompass general sales super-



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Mich. • Dallas, Texas

RAYCO

for **COTTON AND
SYNTHETIC FIBERS**

PERSONAL NEWS

vision of the towel and decorative fabrics divisions in addition to apparel fabrics, has been associated with Mooresville Mills for more than ten years. He also is a director of the company.

Cason J. Callaway of Callaway Mills Co., LaGrange, Ga., creator of the Callaway Plan for Agriculture, has been awarded the Green Ribbon Conservation Award by the National Council of State Garden Clubs for outstanding work in that field.

James C. Self, president and treasurer of Greenwood (S. C.) Mills, has been named "Colonel of Industry" and "Honorary Citizen of the City of Greenwood." Mr. Self lives just outside the city limits of Greenwood. The dual honor was conferred by the Greenwood City Council in a resolution which cited Mr. Self's "philanthropic work, his industrial developments and innumerable civic achievements and gifts to his community and the city of Greenwood."

Hugh W. White, newspaperman of Charlotte, N. C., has become associated with the Institute of Textile Technology at Charlottesville, Va., as associate editor. Prior to accepting his new position, Mr. White, a native South Carolinian, was city editor of *The Charlotte News*.

Hunter Marshall of Charlotte, N. C., secretary-treasurer of the North Carolina Cotton Manufacturers Association, was honored recently at commencement exercises of Queens College, Charlotte, when he was presented the Algernon Sidney Sullivan Award. These awards are given through permission of the New York Southern Society and in colleges which have this privilege are considered among the finest honors which can be won.

W. F. Luckenbach, Jr., has been appointed manager of industrial sales and Dr. Daniel W. Duncan head of the chemical engineering process improvement section of Virginia Smelting Co., West Norfolk, Va., producer of industrial chemicals.

John Harden, an experienced newspaperman and until recently secretary to Gov.

R. Gregg Cherry of North Carolina, has been named director of public relations and publicity in the South for Burlington Mills Corp. He assumed his duties at the company's headquarters in Greensboro, N. C., early this month.

Dr. John H. Sachs, manager of the development division of the E. I. du Pont de Nemours & Co. organic chemicals department, retired May 31 after 31 years with the company. Dr. Sachs played a leading role in building up the American dyestuff industry to its present position, particularly in the synthesis of anthraquinone vat dyes, on which he is a recognized authority.

Clarence W. Angeline has just joined the Holly Mills unit of American Yarn & Processing Co., Mt. Holly, N. C., as a tricot knitting supervisor.

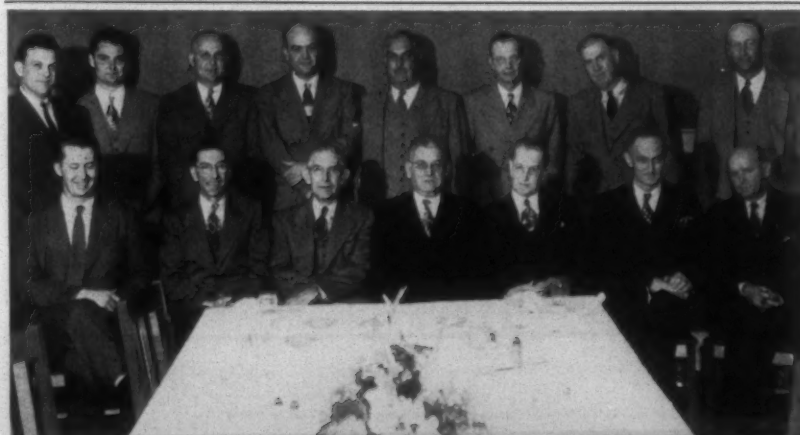
Karl H. Inderfurth has been appointed assistant to W. S. Warren, sales manager of Universal Winding Co., Providence, R. I. Mr. Inderfurth will be in charge of the promotional, advertising and sales research departments of both Universal and its Atwood Division at Stonington, Conn.

Abijah U. Fox has been elected treasurer of American Thread Co., effective Aug. 2. He formerly was associated with National City Bank of New York, Mathieson Chemical Corp., and Swan, Culbertson & Fritz, investment banking firm.

S. L. Lewis, Jr., has been elected a vice-president of Reeves Bros., Inc. He is general sales manager of the Eagle & Phenix Division of Fairforest Co., a subsidiary of Reeves Bros. acquired in 1947.

Elmer H. Weihe, who has been with Owens-Corning Fiberglas Corp. and predecessor companies for more than 30 years, has been named assistant treasurer by the Fiberglas board of directors. He has been the firm's credit manager since 1942.

Henry H. Lickel, vice-president and assistant secretary has been elected secretary of William Iselin & Co., Inc., New York City. Stellan C. Wollmar, vice-president, will also serve as treasurer of the company. George A. Vondermuhll will retain his post as first vice-president of the company but has resigned as secretary and treasurer. Mr.



Shown above are officers and salesmen of Slip-Not Belting Corp., Kingsport, Tenn., who gathered at Kingsport in April to celebrate the firm's 25th anniversary. Awards were made to Vice-Presidents J. D. Cox and M. G. Starnes, who have been with the company since its beginning. Fifteen-year awards were made to Gray Spencer of Gastonia, N. C., Ed Meservey of Atlanta, Ga., and Toy Doane of Kingsport. Ten-year awards were made to Otto Cox of Pelzer, S. C., and Claudius Clemmer (not shown) of Kingsport.

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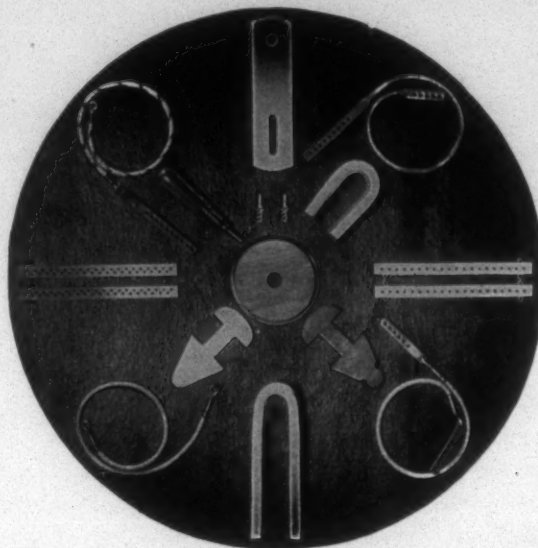
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INDUSTRIES, INC.**
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Our men are practical men; just as our products are practical products—between them they furnish you the service you seek. Either a phone call or a letter will bring a North Man to you—ready and eager to uphold our long and unbroken record for quick and efficient handling of emergency situations.

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PERSONAL NEWS

Lickel has been in charge of the accounting department of the company since 1926. It also has been announced that Edwin T. Dugan, vice-president in charge of the cotton goods division of the credit department, assumes new responsibilities as contact officer in charge of a group of William Iselin clients. His duties in the credit department are being assumed by Hilmer Martinsen, assistant vice-president. Mr. Dugan joined William Iselin & Co., Inc., in 1931, and Mr. Martinsen in 1932.

H. V. Howes of Bemis Bros. Bag Co. has been elected vice-president of the Textile Bag Manufacturers Association. Among members of the group's executive committee are Mr. Howes, Joe Werthan of Werthan Bag Co., Nashville, Tenn., and Benjamin Elsas of Fulton Bag & Cotton Mills, Atlanta, Ga.

Francis S. Bruyn, chairman of the board of Turner Halsey Export Corp., was the guest of honor June 18 at a luncheon tendered him in New York City by 50 of his associated in observance of the 50th anniversary of his entrance into the textile business. He was presented with a silver serving tray on which were engraved the signatures of those present. N. S. W. Vanderhoef, president of Turner Halsey Export Corp. and chairman of the Textile Export Association, officiated and made the presentation.

F. W. Symmes, nationally known textile executive of Greenville, S. C., has been elected to the board of directors of United Merchants & Manufacturers, Inc. Mr. Symmes also is chairman of the board of Union-Buffalo Mills Co., president of Piedmont Plush Mills and president and treasurer of Nuckasee Mfg. Co.

J. Elmer Hahn has been elected executive vice-president of Lebanon (Tenn.) Woolen Mills, Inc. His duties will be general supervisor at the mill and New York office.

Tom E. Lucas, formerly connected with Watson & Desmond, mill supply firm of Charlotte, N. C., has become associated with Atlantic Supply Co. as vice-president.

Ansel Cook of Callaway Mills, Inc., has been elected president of the Atlanta (Ga.) Textile Club. Other officers are J. Eugene Durden of J. P. Stevens & Co., vice-president; William J. Layng of Bates Fabrics, Inc., secretary; and Keither Quarterman of Hesslein & Co., Inc., treasurer.

George T. Huff, head of the Lovegrove Milling & Feed Co. of Charlottesville, Va., has been elected vice-president of the Charlottesville Woolen Mills, succeeding the late Harman A. Dinwiddie. Harry N. Conduff, secretary of the mills, will fill the treasurer's post held by Mr. Dinwiddie. W. Erskine Buford of W. E. Buford & Co. was appointed to fill the vacancy on the board formerly held by Mr. Dinwiddie.

Jack McCrossan and C. R. Chute are recent additions to the National Cotton Council's utilization research staff. Mr. McCrossan has joined the staff of the market research department as a market investigator with headquarters in Memphis, Tenn. At

the council's Washington office, Mr. Chute has joined the staff of the technical services department and will work principally on surveys relating to technical processes for improving important quality characteristics of cotton.

Phil C. Gossett of Charlotte, N. C., has been named a sales representative for U S Bobbin & Shuttle Co., Lawrence, Mass., and his territory will embrace the greater part of North Carolina and the state of Virginia. His headquarters will be at 1110 Johnston Building, Charlotte.

John R. Foster, who has been associated with Odell Mill Supply Co., Greensboro, N. C., for 16 years, has been promoted from assistant secretary and office manager to the position of secretary of the company. M. Stewart Robertson, Jr., formerly connected with Merrill Lynch, Pierce, Fenner & Beane, has succeeded Mr. Foster as office manager.

Dr. Owens H. Browne, former head of the chemistry department at Lenoir Rhyne College, Hickory, N. C., has been named chief of the new textile chemical laboratory of Habow Chemical Co. of Conover, N. C. . . . Other new members of the laboratory staff are James L. Fraley, manager of the sanitary division, and Lloyd L. Summer, Jr., sales representative. Both Mr. Fraley and Mr. Summer are from Cherryville, N. C.

G. R. Russell has been promoted from overseer of carding to superintendent of Plant No. 1 of Rex Mills, Inc., Ranlo, N. C. . . . J. G. England has been transferred from Plant No. 1 to Plant No. 2, Gastonia, N. C., as superintendent. . . . Hoyt Martin has been promoted from night to day overseer of carding at Plant No. 1 and T. L. Case of Chimney Rock, N. C., has been named night overseer of carding to succeed Mr. Martin.

OBITUARY

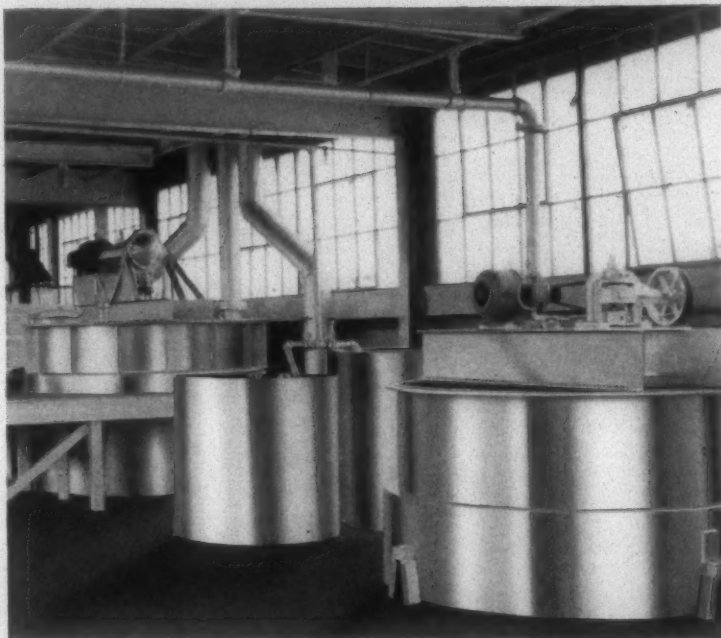
Earl F. Chandler, 60, president of Chandler Machinery Co. in Atlanta, Ga., died June 12 at his home in Atlanta. Mr. Chandler, who was a graduate of Georgia Tech, is survived by his wife.

Morris M. Bryan, Sr., president and treasurer of Jefferson Mills, operating plants in Jefferson and Crawfordville, Ga., died May 23 in an Atlanta, Ga., hospital. Mr. Bryan, a 1913 graduate of Georgia Tech., had been engaged in the textile business for 32 years. Surviving are his wife, three sons and a daughter.

H. A. Dinwiddie, 69, vice-president and treasurer of Charlottesville (Va.) Woolen Mills, died recently in Richmond, Va.

William H. Owen, 71, who retired July 1, 1946, after nearly 49 years service with Fieldcrest Mills, Inc., died of a heart attack May 25 at his home in Leaksville, N. C. During his long career Mr. Owen served in several Fieldcrest units, and for a number of years was foreman of the Karastan dyeing department, Leaksville. Survivors include his wife, one daughter, two sisters and a brother.

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BEING NON-CORROSIVE, *Stainless Steel* tanks and vats will permit colors to run true in successive runs, and allow the use of almost any dye or chemical by remaining unaffected through metallic contamination. Let *Stainless Steel's* strength, lower repair costs and longer life repay the initial costs and reduce the costly maintenance overhead.

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EQUIPMENT - SUPPLIES - LITERATURE

Bullard Clark Co. Formed By Jacobs Consolidation

The consolidation into the Bullard Clark Co. of the E. H. Jacobs Mfg. Co. with its three affiliated companies, The E. H. Jacobs Mfg. Corp. of Charlotte, N. C., The Williamsville Buff Mfg. Co. of Danielson, Conn., Jacobs Rubber Products of Danielson, Conn., and a Jacobs Canadian plant was announced as effective June 1. For 80 years the Jacobs manufacturing companies have been furnishing loom equipment to the countries of the world where the American type loom is used. Their exports go to every country where cloth is woven mechanically, and within the past few years have developed and manufactured products for spinning and other machinery required for the production of yarn and fabric.

One of their most recent developments is a synthetic material from which Plyweld picker sticks are manufactured. More than 85 per cent of the box looms of weaving mills in this country and Canada have replaced the old style hickory picker stick with the Plyweld stick because of its much greater service.

The Williamsville Buff Division was organized in 1893 by the Williamsville Cotton Mills of Conn., which was purchased by



W. Irving Bullard, pictured at left, and Frederick A. Jacobs in 1905. The buff business was retained by the Jacobs Co. and the cotton mill was re-equipped with tire fabric machinery and sold to the Goodyear Tire and Rubber Co. of Akron, Ohio. The

buff division uses over four million yards of sheeting per year for the manufacture of buff wheels for polishing metal and are also large producers of polishing wheels made of canvas and leather for polishing heavy machinery and hardware. Jacobs Rubber loom accessories are standard throughout the textile industry.

The purpose of the consolidation is to give improved service to the textile industry by increasing production. Plans for more modern equipment and increased floor space are now in the blueprint stage.

The parent company was established in 1869 by Edward H. and Frederick A. Jacobs of Danielson, Conn., whose business and ideology was to have management and ownership remain within the family. Today, after 80 years, the third generation assumes control of management and ownership, while six sons of the third generation are being trained to carry on.

The new officers of the Bullard Clark Co. are: W. Irving Bullard, chairman of the board of directors; Edward Jacobs Bullard,

president and treasurer; B. T. Clark, executive vice-president. The division executives are as follows: Williamsville Buff Division, Jack Lodge, vice-president; Jacobs Rubber Division, J. E. Moe, vice-president; E. H. Jacobs Southern Division, C. W. Cain, Jr., vice-president; E. H. Jacobs Northern Division, B. T. Clark, executive vice-president.

Personnel Bibliography Offered By University

The University of Texas Bureau of Business Research, Austin, Tex., announces the third printing and complete revision of *A Selected and Annotated Bibliography of Recent Literature on Personnel Administration and Industrial Relations*.

Revised by Keith Davis, assistant professor of industrial relations in the college of business administration at the university, only references published since 1942 are included in this edition. In addition to a new section on "Communications in Business" recent books and more periodicals have been added. Where available, the prices and the number of pages have been inserted.

Over 2,500 copies of the first two editions have been distributed. Further revisions will be made from time to time to keep the reading list entirely up to date. Copies of the bibliography may be obtained free of charge upon request to the Bureau of Business Research.

Marquette Appoints Haldane As Canadian Representative

The Marquette Metal Products Co., Cleveland, Ohio, manufacturer of roller bearing spindles with full-floating footstep bearing, have appointed Ian M. Haldane & Co., London, Ont., as Canadian representative.

Philadelphia Quartz Co. To Move General Offices

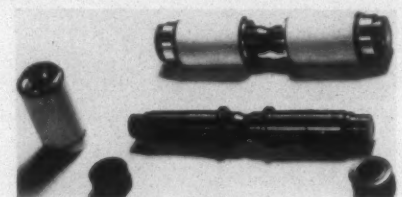
Philadelphia Quartz Co., manufacturer of silicates of soda, has announced the removal of its general offices from 121 South Third Street, Philadelphia, where they have been located for almost a half century. On Aug. 2, 1948, the offices will be in the Public Ledger Building, Independence Square, Philadelphia. The company is to occupy the office space on the eleventh floor of the building. This month marks also the completion of 117 years of business for the company. It was started by Joseph Elkinton as a soap and candle manufactory in Philadelphia on July 21, 1831. Early in the '60s, the Elkingtons produced silicate of soda for their own soaps, and soon after for other soap manufacturers.

The Philadelphia Quartz Co. name was first used in 1864 when a new plant was built for producing silicate of soda. Soap

and silicates continued to be manufactured until 1904, when silicates became the exclusive products of the company. From the original use in soap making, the company's research has extended the list of uses to a large number of industries. To supply the needs of such diversified fields, the company operates plants at Chester, Pa., Anderson, Ind., Baltimore, Md., Gardenville, N. Y., Jeffersonville, Ind., Kansas City, Kans., Rahway, N. J., St. Louis, Mo., and Utica, Ill. Associated companies are the Philadelphia Quartz Co. of California with plants located at Berkeley and Los Angeles, Cal., and Tacoma, Wash., and the National Silicates Ltd., Toronto, Ontario, Can.

Torrington Producing New Needle Bearing Top Roll

A new line of needle bearing top rolls has been developed by The Torrington Co., Torrington, Conn., for use in various positions on roving and spinning frames. These new top rolls offer improved economy in action and contribute to higher quality roving and yarn. Needle bearing top rolls of the design illustrated below have been adopted as standard equipment in the middle row of the Saco-Lowell Shaw controlled draft system for roving and spinning frames.



The new top rolls are compact units and are dimensionally interchangeable with other types of top rolls. Small OD in relation to bore of the needle bearing allows use of a large arbor which gives freedom from deflection, yet provides adequate cross-section for a durable shell and housing. The high radial capacity, derived from the large area of bearing contact surface, ensures many years of service. Four rubber seals prevent the leakage of lubricant, assuring a cleaner product and increasing the interval between picking. A large oil reservoir between the two bearings in each boss allows many hours of operation before relubrication is required. Labyrinth seals are an additional feature which prevent the accumulation of fly or lint between the shell and arbor.

From a maintenance standpoint, other features also contribute to economy. Low tolerance in the manufacture of mating parts, and the use of carefully designed and closely controlled snap rings, insure effortless removal of the shell and easy reassembly of shell and end buttons. The unit requires no adjustment by mill personnel; the long service life provided by anti-friction operation

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sizes

instantly smothers the blaze
with a heavy gas produced by
a fluid of carbon tetrachloride
and carbon dioxide scientifically
blended into the most
effective fire extinguishing
agent. The extinguisher is non-
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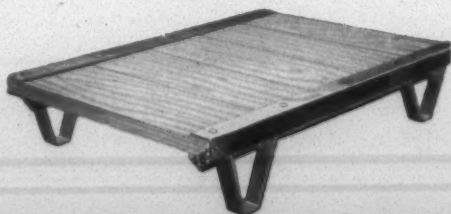
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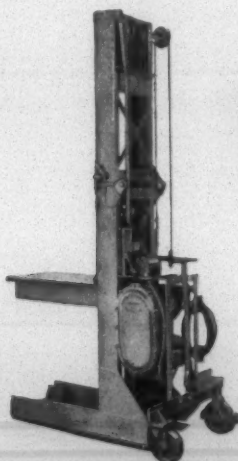


The Barrett Lift-Truck Saves Space—Saves
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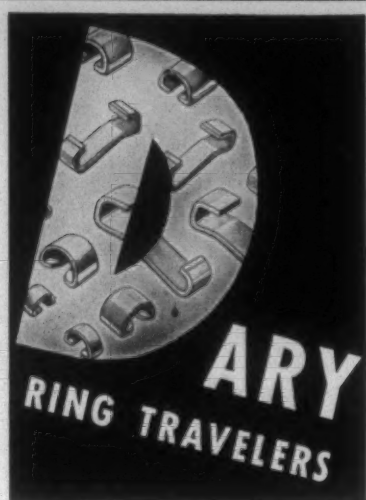
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In this case, the round trip is the trip around the spinning ring; this is the kind of traveling Dary does best. Dary Ring Travelers are "round trip" specialists, veterans of the merry-go-round ride on spinning and twisting rings. When you buy Dary you buy a ticket to traveler perfection.

Dary Ring Travelers earned their reputation for superiority by longer wear around the ring. And they wear longer because they are made right—hard, smooth and tempered for durability. They make possible higher spindle speeds with every type and count yarn.

Get your Dary "round trip" ticket. See the friendly Dary Representative near you. He'll be glad to tell you all about Dary.

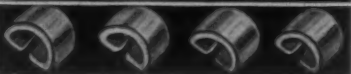


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JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.

JOHN H. O'NEILL, BOX 720, ATLANTA, GA.

H. REID LOCKMAN, BOX 515, SPARTANBURG, S. C.



FOR THE TEXTILE INDUSTRY'S USE—

eliminates the need for servicing or return to the manufacturer; and the rugged, well-proportioned design prevents the unit being damaged during handling. Smooth anti-friction operation with minimum wear, precision manufacture and the stability of the design employing two needle bearings per boss to prevent roll "rock," all combine to produce uniform quality of the yarn or roving.

U. S. Testing To Have Weather Proving Ground

Expanding its facilities for weather testing materials and products of all kinds, the United States Testing Co., Inc., Hoboken, N. J., has completed arrangements with a proving ground operation in Miami, Fla., for actual exposures to sun, wind, rain and salt water. This area was selected because the number of days of intense sunshine, free from cloud interference, give wide scope to weathering tests at various seasons of the year. New equipment is being added to the proving ground which, instead of approximate figures heretofore available for under glass tests, will make exact radiation compilations. Before the new installations, the pyrheliometers were picking up solar energy directly so that radiation in B. T. U.'s per square foot were not entirely accurate.

At the headquarters laboratories in Hoboken, N. J., the company's weathering facilities, under simulated conditions, consist of batteries of Fade-Ometers, both revolving and stationary, Weather-Ometers, oxygen and air bombs, high humidity chambers, salt air chambers and circulated air ovens, gear type, with every kind of control. These facilities are used widely in textile and paint color determinations. The new combination of actual outside weather exposures with the simulated weather conditions in the laboratory, gives the company the most complete commercial testing set-up of its kind in the country.

Oakite Service Report Outlines Control Method

How a simplified method of water treatment with a specialized chemical material provides an effective answer to trouble arising from slime formation and lime-scale deposition on coils and other surfaces of evaporative condensers, coolers, humidifying systems and certain types of air conditioning equipment, is described in a new Service Report which has just been released by Oakite Products, Inc., New York.

The report offers a thorough-going account of the procedures employed in conjunction with specially compounded chemical materials that: (1) prevent formation of lime-scale and slime deposits on surfaces of coils or fins, and on spray nozzles, spray headers, etc.; and (2) remove already formed slime and algae accumulations from coils, eliminator plates or baffles, sump tanks and suction screens. Material specifications, working directions, recommended solution concentrations and working temperatures for this work are fully covered. In addition, helpful data on the effective pressure-cleaning method of removing long-accumulated,

heavy slime deposits on coils, and on the immersion method of cleaning evaporative condensers and coolers having removable coil assemblies, is also provided. Readers desiring free copies of this new Service Report may obtain them by addressing Oakite Products, Inc., 157 Thames Street, New York 6, N. Y.

Moisture Register Co. Announces New Model

Announcement of a new model pressurized moisture register, designed to accurately test moisture content of loose and compressible materials used in the textile industry, has been made by Moisture Register Co., 133 North Garfield Avenue, Alhambra, Cal. This instrument is now being used specifically on scoured wool, combed wool (tops), wool yarns (skeins), wool blankets, and bulk cotton. Identified as Moisture Register Model PD-1, it is the newest in a series of electronic moisture meters now available, after thorough field testing in actual use. Through deep penetration by high frequency field it tends to average moisture content of material to a depth of three inches as compared to a penetration heretofore limited to a depth of one inch.



Constantly duplicable readings are obtained by incorporation of coil spring tension on the electrode of the instrument. At predetermined pressure point, microswitch is activated. Signal is accomplished by lighting the meter dial. Further pressure opens the illuminating circuit. Readings must be taken when meter dial is lighted for accurate instrument results. Calibrations are available for wool mentioned. Numerical dial scale enables operators to establish their own calibrations for other materials using standard oven tests as a basis of comparison. Average range of moisture covered is zero to 15 per cent, wet weight basis. Complete details are available without obligation, upon request to the manufacturer. Since there is a design variation between instruments for cotton and woolen materials, type of material to be tested should be specified.

Index To Standards Offered By A. S. T. M.

The American Society for Testing Materials currently is making available to the industry its revised *Index to A. S. T. M. Standards*, as of December, 1947. Issued in May, 1948, the publication is described as an adjunct to the society's big 1946 *Book of Standards* (6,600 pages) and the 1947 supplements (1,800 pages), and enables any of the some 1,500 standard specifications and tests in the volumes to be located readily. The index will be of service to those who wish to determine whether A. S. T. M.

has issued standard specifications, test methods, or definitions covering a particular engineering material or subject. All items are listed under appropriate key words according to the particular subjects they cover. As a convenience, a list is given of the specifications and tests in numerical sequence of their serial designations. Copies of the 240-page publication are furnished without charge on written request to A. S. T. M. headquarters, 1916 Race Street, Philadelphia 3, Pa.

Harwood Bramwell Feeders Are Described In Folder

Harwood Bramwell feeders, produced by Geo. S. Harwood & Son, Worcester, Mass., are described in a folder recently distributed to the trade. The feeders are said to speed up production, cut costs by increasing efficiency and to turn out higher quality, more serviceable products. Further information regarding the Harwood Bramwell feeders

will be supplied on written request to the firm at 50 Lagrange Street, Worcester 8, Mass.

Machinery Producing Firm Acquired By Wiesner-Rapp

The Wiesner-Rapp Co., Inc., Buffalo, N. Y., manufacturer of equipment for "wet-end" processing, announces the acquisition of the Farnham Mfg. Co., 1600 Seneca Street, Buffalo, who for over 40 years were leaders in designing and manufacturing special machinery. The combined equipment of these two companies will more than double the production facilities of Wiesner-Rapp and will permit them to keep pace with the constantly increasing demand for their finishing machinery.

Wiesner-Rapp metal fabrication know-how plus Farnham machinery building know-how will provide an unusual combination of facilities for well-balanced production under one supervisory and responsible

management. Wiesner-Rapp will move to the Seneca Street plant about July 1st and all of their manufacturing operations will be carried on from there.

Glyco Report Describes Surface-Active Agents

"Textile Applications of the Glycol Fatty Acid Esters" is the title of a reprint that is now available from the Glyco Products Co., Inc., Brooklyn, N. Y. This describes the new class of surface-active agents that are useful as wetting-agents, emulsifiers, softeners and lubricants. They are of particular interest because they are non-ionic. The higher members (polyglycol esters) are soluble in both water, hydrocarbons and oils. They range in consistency from liquids to waxes. They are used to make soluble oils, dry-cleaning soap bases, dispersible pigments and dyes, delusterants, oil-in-water and water-in-oil emulsions, scouring and desizing compounds, dye penetrants, textile

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Designed for long life, minimum stretch and greater flexibility. Specially constructed of layers of cotton duck impregnated with rubber in thicknesses as required. In finished strapping or roll lengths.

No stretch. No slip. Uniform operation plus long life insure continuous, more efficient production.

Absorb impact shock and vibration. Reduce building and machinery maintenance. Scientifically constructed of specially woven cotton duck impregnated with rubber. By using Fabreeka cement lag screws or bolts can be eliminated.

Specially designed for minimum stretch, smoothness of operation and long life. Can be furnished in wrapped endless construction or with stepped splices, or in roll lengths.

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softeners, anti-static coning oils, thickening agents, fiber lubricants and starch gel stabilizers. A chart giving the chemical composition and physical properties of these esters is included.

Allis-Chalmers Announces Improved Textile Motor

An improved "quick-clean" textile motor with prelubricated, double-width, double-sealed ball bearings which make servicing practically unnecessary for five-year periods, has been announced by Allis-Chalmers Norwood Works. The redesigned motor has heavy section cast iron bearing brackets with large openings, specially machined and finished to prevent building up of lint. Stator yoke is of cast iron with a specially designed external contour which provides a smooth non-obstructing flow to the ventilating air after it passes through the openings in the bearing brackets. Stator winding utilizes heavy insulated copper. Coil ends are enclosed with bakelite shields held in place by silicon compound and self-tapping screws which fit into drilled holes in the outside edges of the yoke. Rotor cage is die cast with integrally-cast fans of special design to give the ventilating air the velocity and direction necessary for prevention of lint accumulation. The motor, available in three, five, 7½, ten and 15 horsepower sizes, is suitable for spinning, twisting and roving frames and other applications common in textile mills.

E. F. Rose Co. Opens Branch In Newnan, Ga.

E. F. Rose & Co. of Maiden, N. C., manufacturer of plush-covered scavenger rollers and top clearer boards used for cotton and rayon spinning, recently have opened a branch plant at Newnan, Ga., to serve textile mills in Georgia, Alabama and throughout the South. The new plant is under the supervision of William G. Rose, son of E. F. Rose, owner and founder of the company. Currently, the primary activity of the new plant is the re-covering of old rollers. Manufacture of new rollers will be continued at the home plant at Maiden. Later, Mr. Rose states, plans call for manufacture of new rollers at the Newnan plant also.

New Adjustable Sheave Eliminates Freezing

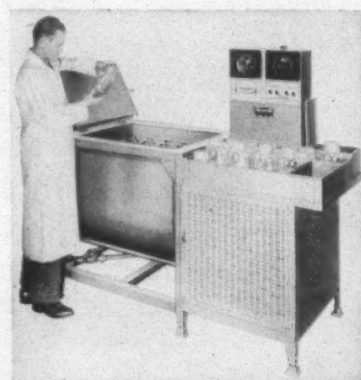
Frozen adjusting mechanisms need no longer be a drive problem, according to the American Pulley Co., Philadelphia, Pa., in announcing the first sheave that provides permanent adjustability. New construction feature of the sheave is the rubber-lagged hub upon which the sheave flanges are mounted. Bonded to the steel hub of the sheave, the rubber section eliminates freezing by acting as an insulating cushion between the flanges and the hub of the sheave. Additional advantages of the wide-range adjustable-diameter sheave are quietness, balance, ease of adjustment, non-corrosive adjustment and space saving.

Wide-range, adjustable-diameter sheaves

are made in two and three grooves with pitch diameter variation of 5.25 inches to 10.0 inches. This wide range provides four to five times the speed variation available with standard adjustable-diameter sheaves. The adjustment for speed variation is made while the drive is stationary. American wide-range adjustable-diameter wedgbelt sheaves are designed to utilize multiple "R" section V-belts. They will handle loads up to 15 horsepower.

New Launder-Ometers For Research Testing

The Atlas Electric Devices Co., 361 West Superior Street, Chicago, has announced the development of two new Launder-Ometer models. The large capacity of these new machines makes them ideal for laboratory research in testing color-fastness of dyestuffs and launderability of materials, the company claims.



Model L1Q has a capacity of 20 pint or 20 quart jars; Model L2Q will accommodate 20 pint, 20 quart or six half-gallon jars. Both units are available with vari-speed drive unit for operation between ten and 50 r.p.m. These new Launder-Ometers are consistent with the high standard of manufacture set by the thousands of Weather-Ometers, Fade-Ometers and Launder-Ometers now in use throughout the world for all types of testing.

Yale & Towne Announces Pallet Handling Bulletin

The Philadelphia Division of Yale & Towne Mfg. Co. announces a new two-colored 20-page bulletin on pallet-system applications, hand lift and Worksaver pallet truck models, and recommended pallet design. Six full pages are devoted to pictures illustrating uses of the pallet system. Typical uses include hauling goods from one process to another, hauling finished goods to the shipping room, storing goods both within the plant and in the plant yard, loading street trucks and rail cars, and performing general transportation jobs in and about the plant.

Two pages are devoted to drawings and text on recommended pallet design. Double-face reversible pallets, double-face non-reversible pallets, four-way entry pallets, and single-face pallets are discussed with reference to design problems which must be kept in mind when installing a system for use with standard handling equipment. Four

pages are devoted to cutaway illustrations of hand truck mechanisms, text on advantages of both mechanical and hydraulic lifting mechanisms, and three charts on the Easy-Lift J, Load King and Load King H and Y model pallet trucks. These charts recommend the correct trucks for use with double-face and single-face pallets and give capacities, lift frame specifications, ground clearance, and structural data for the various models.

Five pages are devoted to the Worksaver. The Worksaver is a hand truck in that the operator guides it by the handle; it is a power truck in that both lifting and motivation are powered by battery. Capacity, weight, speeds, lift, dimensions, and electrical, mechanical and general characteristics are given for the pallet, tinplate, tilting fork, and non-tilting fork Worksavers. Photos showing Worksavers in actual operations complete the bulletin. In requesting copies of this bulletin please refer to Bulletin P-673, T. B.

Riggs & Lombard Has New Fleet Line Soaper

Riggs & Lombard, Inc., Lowell, Mass., manufacturer of textile wet finishing equipment, announces a new Fleet Line soaping machine now in production. The new soaper may be used for soaping only one side of the cloth, or, by a tandem set-up, for soaping both sides. One of its distinctive features is a doctor blade, which may be adjusted to regulate the amount of soap carried to the cloth. The machine will handle all types of woolen and worsted fabrics at speeds of 20 to 60 y.p.m., depending on conditions and requirements. At present the soap level is maintained manually, but it is expected that installations in the near future will incorporate automatic constant level controls.

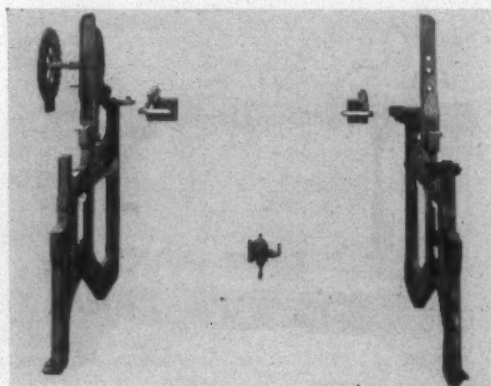
Gould Offers Brochures On Industrial Truck Batteries

Plant managers, industrial engineers, foremen, service men, purchasing agents, and others whose problems embrace the purchase and maintenance of materials handling systems, will want to obtain two new six-page, two-color, technical brochures on industrial truck batteries, recently announced by the Gould Storage Battery Corp., Trenton, N. J. The new literature includes liberal illustration, description, and full technical data on the Gould Thirty and the Gould Kathanode batteries.

An unusually helpful element in the Gould Thirty brochure is a giant exploded-view showing every construction feature of this battery and emphasizing the exclusive glass tape feature used in insulating the positive plate. Text explains how the battery has been specially designed for use in industrial trucks and explains the features which enable the battery to deliver approximately 30 per cent greater ton-mileage during the life of the battery than conventional batteries. Engineering specifications include: (1) ampere hour capacity and kilowatt hour capacity for six and eight-hour periods of use, (2) ampere discharge rates for six-hour periods of use, (3) both tray and electrolyte weights, and (4) cell dimensions. These specifications are given for the standard height (XVL-P), high type (XL-P), and

5 reasons why HUNT REBUILT LOOMS are 1948's best buy!

1. Hunt Spreaders add needed bearings, strengthen and stabilize the entire loom.
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3. Every part that counts in production is new—giving new-loom performance.
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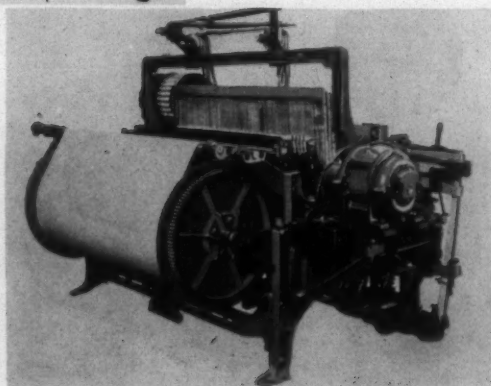


BEFORE

Starting with the loomsides, Hunt engineers plan—and skilled Hunt loom machinists build—the loom that will do the particular job the customer wants. Rigid supervision assures finished looms of the highest quality and performance.

AFTER

Completely rebuilt! From 90% to 95% of the parts in the loom are new. Patented Hunt Spreader is now a part of the loom. Equipped also with Cut-Tooth Worm Take-Up, Roper No. 4 Let-Off, Feelers, Thread Cutters and 4 to 6 bank electric Warp Stop Motion. Hunt Motor or Belt Drive; and Dobby Head or Cam Equipped as specified by customer.



Do you need modern rayon filament looms in any width up to 60 inches? Do you plan a loom expansion or weave room modernization program? If so, write, wire, or phone today. Ask for your copy of our illustrated brochure, "HUNT CERTIFIED REBUILT LOOMS."

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GREENVILLE, SOUTH CAROLINA

FOR THE TEXTILE INDUSTRY'S USE—

extra-high type (AMH-P) batteries. In conclusion, information on the new Gould laboratory; two-plant delivery facilities; and field service, is given. The material contained in the Kathanode brochure is similar to that contained in the Thirty brochure. It illustrates and describes the features which make this older member of the Gould line desirable where uniform heavy truck duty is encountered. Engineering specifications are given for (1) standard height, (2) standard height extra capacity, (3) intermediate height, (4) high type, and (5) extra high type batteries. Requests for these brochures should refer to numbers GB-573 and GB-574.

Du Pont Announces Price Rise On Dyestuff Items

The Du Pont Co. June 10 announced increases of five to ten per cent on selected items of dyestuffs where the company said the action was made necessary by increased production costs on those items.

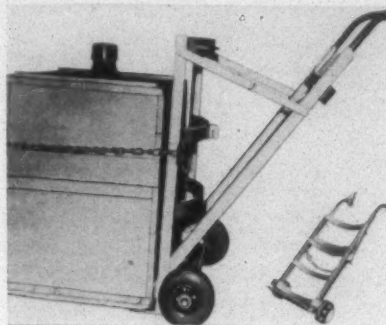
The company said that on more than a majority of the hundreds of dyestuffs items it produces, it is making no increase even though production costs have also increased on these. The increases, effective July 1, will raise the average for the entire line by less than four per cent.

The present average of Du Pont dyestuffs prices has been held to approximately 18 per cent above the 1939 level, despite in-

creases several times as great in the cost of labor, raw materials and other manufacturing expenses, and compared with an increase of 113 per cent in the national average of wholesale prices in the same period.

Offer Versatile Safety Hand Truck For Industry

A lightweight, sturdy hand truck, combining many safety features and described by its manufacturer as the "most versatile safety hand truck on the market" is available from General Scientific Equipment Co., 27th and Huntingdon Streets, Philadelphia 32, Pa.



Of riveted, welded and bolted construction, with tubular handles, and six-inch aluminum acid-resistant wheels or rubber tires, this safety all-purpose hand truck has two carrying positions which adapt it to a variety of portage jobs. In the open position the truck can be used to safely move car-

boys, acetylene tanks, barrels, packages and other items in a vertical position to avoid spilling the contents. In the closed position the truck can be used as a hand truck to transport boxes, barrels and similar items in the conventional manner.

According to the manufacturer, the truck is designed to give maximum leverage on the handles and to carry the load on the wheels. The hand truck can be easily converted from one position to the other and is firmly secure in either position. A chain is provided to hold items being transported.

Illuminating Society Publishes Handbook

In simple terms and highly condensed style the *I. E. S. Lighting Handbook*, published by the Illuminating Engineering Society, 51 Madison Avenue, New York 10, N. Y., places conveniently within reach of all its readers the accumulated knowledge of the past 41 years of lighting progress, evaluated and interpreted with respect to today's needs by a highly qualified group of over 100 contributing specialists—engineers, architects, physicists, decorators, artists and ophthalmologists—who have worked for more than two years under the direction of a special committee of the society and a full-time editorial staff to provide the most complete coverage of the field possible within the limits of a conveniently-sized volume. In many ways the *I. E. S. Lighting Handbook* is particularly well-adapted to reader convenience. For example, the type face is

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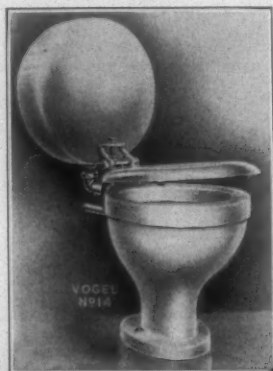
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QUALITY • ECONOMY • DEPENDABILITY

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VOGEL NUMBER 14 SOUTHERN OUTFIT

A durable, economical closet for Mills, Factories and all types of industrial installation



When installing No. 14 closet trap must be set directly under bowl.

The Vogel No. 14 has a vitreous china top supply bowl, heavy flush valve, reinforced hardwood seat, painted white enameled drum shaped tank and union ell flush connection.

(The Number 14 is not frost-proof)

JOSEPH A. VOGEL COMPANY, Wilmington 99, Delaware

VOGEL PRODUCTS

larger than that often encountered in engineering handbooks and, in combination with the mat finish paper, is more legible. To make clear and easily understood all points of particular importance, an unusually large number of carefully selected photographs and specially prepared line drawings are included.

The detailed alphabetical index provides a simple means of finding discussion on subjects of interest, and the original literature referenced at the end of each section will amplify the condensed handbook treatment. To aid in completing lighting installation plans, detailed data on many types of commercially available lighting equipment are included in the manufacturers' data section. In some instances, as in the case of the average brightness calculation procedure, formerly thought to be a complex tool of the mathematician, it has been possible, for the first time, to simplify design techniques, and other working tools, so that now they may be used easily by everyone.

Every precaution has been taken to secure broad coverage of all phases of lighting and a completely objective approach. Edited by R. W. McKinley, the book contains 850 pages and sells for \$7.50 per copy.

Wetting Agent Pamphlet Released By Houghton

E. F. Houghton & Co. of Philadelphia has issued a four-page pamphlet on Cerfak 1300, a new concentrated liquid non-ionic detergent and wetting agent.

The pamphlet is divided into five sections: (1) a description of Cerfak 1300;



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GOOD YARN

Depends on GOOD CARDING

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GOOD SCREENS

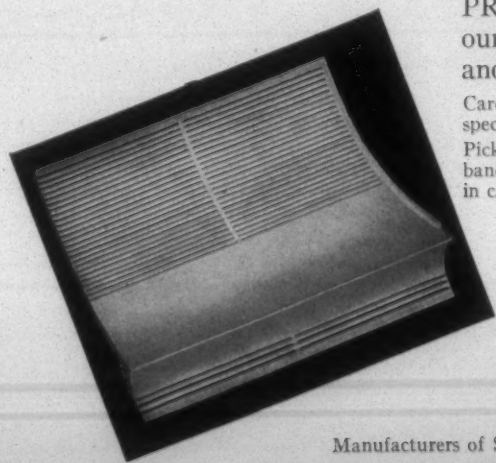
The only way to be sure screens are in good condition is to take them out for inspection at regular intervals. Screens that are bent, cut, or frayed will not produce a high class sliver to say nothing of the excess waste they cause.

Check your screens now . . . and place your order for enough spare card and picker screens to meet any emergency. It's cheaper to stock them than to wait for repairs.

PROMPT SERVICE . . . We have recently enlarged our facilities to give you prompt service on all makes and models of new and rebuilt card and picker screens.

Card Screens . . . Perforated or ribbed types, precision built to standard specifications.

Picker Screens . . . English mesh, 1/4 inch wire, or perforated metal. End bands continuous and smoothly welved. Seams welded to prevent melting in case of fire.



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Manufacturers of Stainless Steel Dye Vats; Brass Twister Troughs; Lap Aprons; Aspirators; Sliver Pans; Jenkins Dynamically Balanced Cylinders.

FOR THE TEXTILE INDUSTRY'S USE—

(2) a detergency chart giving readings of the detergency of the product in different concentrations, temperatures and water conditions; (3) a section devoted to the wetting out ability of Cerfak 1300 with accom-

panying Draves Tests chart; (4) applications of Cerfak 1300 throughout the entire textile industry and (5) a summary of the performance of Cerfak 1300 along with a list of other products designed for the textile industry by Houghton.

Cerfak 1300 is described in the pamphlet as a versatile, efficient and economical

"across-the-board" synthetic surface active agent excellent for both wetting and scouring. The pamphlet is available by writing to E. F. Houghton & Co., 303 W. Lehigh Avenue, Philadelphia, Pa.

Booklet Lists Advantages Of Insulux Glass Block

Daylight In Industrial Buildings, a 36-page booklet outlining the advantages which insulux glass block offers to owners and operators of industrial buildings, is ready for distribution by American Structural Products Co. Attractively illustrated, the booklet is a condensed yet comprehensive treatise on the characteristics of insulux glass block, its advantages from a cost standpoint, and methods of installation. The text is presented in lucid style for quick understanding, and technical data is augmented with simplified charts and drawings.

The booklet is arranged in ten sections embracing such topics as the daylight transmitting qualities of insulux glass block, its insulation value and savings in fuel attained from its use. Other subjects include heat gain, permanency and low maintenance, protection of equipment and processes, sanitation, and sound reduction.

Each of the sections is amply illustrated with photographs of actual glass block installations in a great variety of industrial plants, textile mills, offices, power plants and laboratories. These present visually the advantages of installations in new construction and in older buildings alike.

The last three sections, totaling 12 pages, are devoted to design description of insulux glass block, architectural details, and specifications. The architectural section offers a multitude of installation details embracing small and large panel construction, fenestration, door frames, methods for remodeling, and the insertion of wood and metal ventilators. This section is of special value to plant engineers, architects, and contractors. Copies of the booklet may be obtained from American Structural Products Co., Toledo 1, Ohio.

Offer Bibliography Of O. T. S. Technical Reports

A special bibliography listing 1,200 reports based on investigations and evaluations of German scientific, technical and industrial intelligence by American investigators under the direction of the Field Information Agency, Technical (F.I.A.T.) is now on sale by the Office of Technical Services, Department of Commerce. Many of the reports are available in printed form. Since about 200 reports made by F.I.A.T. investigators have not yet been received and printed by O.T.S. a supplement to the special bibliography will be prepared when all of the outstanding reports become available. The bibliography of F.I.A.T. reports was prepared by O.T.S. librarians for the assistance of research workers, reference librarians and others interested in the fund of scientific and technical information collected from German firms and laboratories during 1945-47.

For convenience, the publication is arranged in three parts: Part I lists the reports by F.I.A.T. numbers with the correlated P.B. numbers (the number series of O.T.S. reports). The title, author, number of pages

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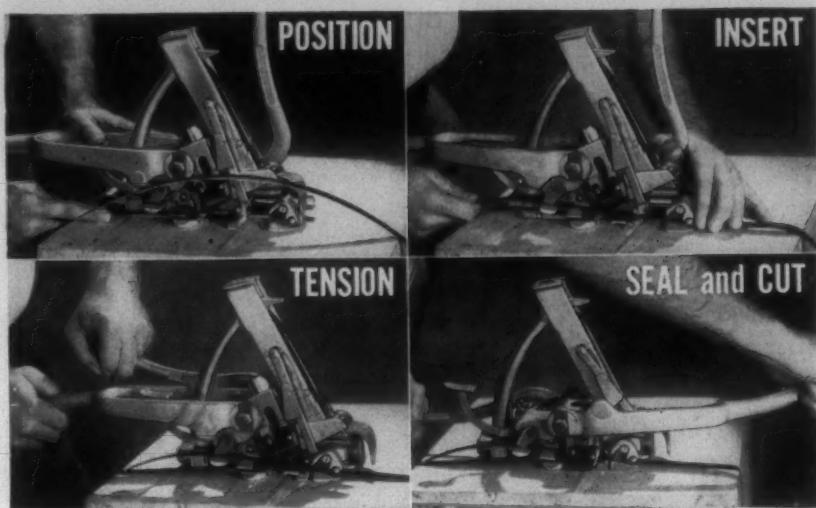
and price of each report is given. Also listed is the volume and page number of the *Bibliography of Scientific and Industrial Reports* containing an abstract of the report. (The bibliography is a weekly publication prepared by O.T.S. It contains abstracts of all O.T.S. scientific and technical reports. Subscriptions at \$10 per year may be placed with the Superintendent of Documents, Washington 25, D. C.) Part II is a cross reference list arranged by P.B. number and corresponding F.I.A.T. number, Part III is an author and subject index of the F.I.A.T. reports identified by F.I.A.T. numbers.

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Machinery Concern Is Expanding Facilities

Cocker Machine & Foundry Co., designers and builders of warp preparation equipment, recently announced plans for an expansion of facilities, including the erection of a new steel and concrete foundry building near Lowell, N. C. The firm recently completed a new two-story brick engineering building and an addition to the office building. The firm has purchased an 18-acre site for the new foundry on the Lowell highway between Smyre Mills and Lowell. All foundry equipment will be moved from the old foundry to the new plant, and the old foundry space will be used for machine shops and shipping and receiving. The new foundry is expected to be in operation by late July.

Jenkins Metal Shops, Inc., Gastonia, N. C., has under way a 7,400 square foot expansion. Additional equipment will be installed upon completion of the new building and the entire space will be used for expanded production and faster delivery.



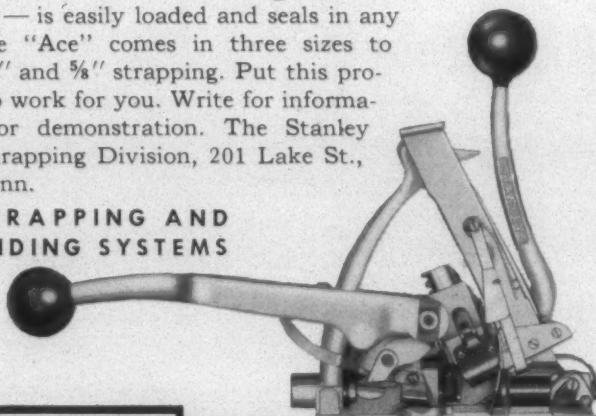
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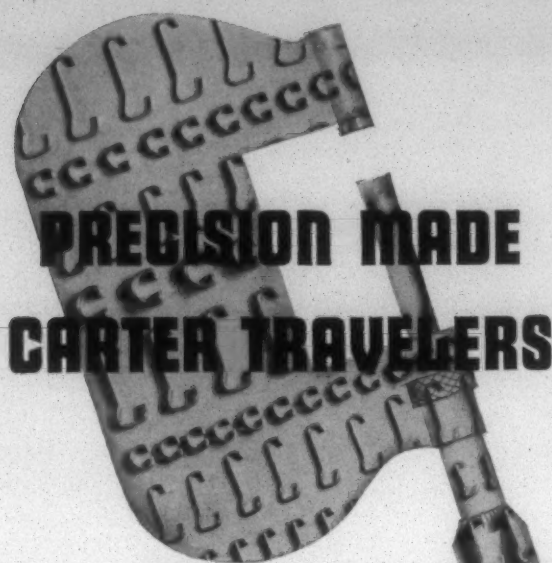
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Du Pont Plans \$30,000,000 Lab Expansion

A \$30,000,000 expansion of research facilities at the Du Pont Co.'s Experimental Station at Wilmington, Del., has been approved by the executive and finance committees and submitted for ratification to the board of directors, the company announced recently. This is the biggest single laboratory project the company has ever undertaken.

Some of the company's research organizations now located elsewhere will transfer to the new facilities. The ones already at the station are laboratories of the Chemical, Engineering, Grasselli and Ammonia Departments, the nylon laboratory and the Haskell Toxicological Laboratory. They will be joined by the Rayon Pioneering Laboratory, by research personnel of the Plastics and Pigments Departments and by additional Grasselli Department research activities. The number of chemists and other technologists at the station will be almost doubled when construction is completed.

This major addition to scientific facilities will be an important factor in a program to increase Du Pont activities in fundamental, long-range research as well as research directed toward the development of new chemical products and processes.

Construction plans call for ten new laboratory and semi-works buildings for long-range research and development of new chemical discoveries. Existing laboratory buildings for nylon and other products will be enlarged. There are also to be 13 new service buildings.

When the expansion is completed, the company expects to have 900 technical employees engaged exclusively in research work at the station, of which about 200 will be transferred from other laboratory locations. Now there are approximately 500 at the station. The total of all employees there, technical and non-technical, will approximate 2,500.

Major part of the plan for the expanded Wilmington station calls for construction of an entirely new section on 55 acres of the Du Pont Country Club, which is adjacent to the station. The entire job, including work on new and existing buildings as well as outside work, is to be finished in approximately two and one-half years.

The Chemical Department, which is devoted exclusively to research, will use its new facilities primarily for fundamental research with the object of discovering new scientific facts without regard to immediate commercial use. Fundamental investigations have become one of the most valuable phases of Du Pont research work in laying the foundation for new lines of applied research. In the past, it has led to nylon, among other things. Some of the new facilities for other departments will also be devoted to long-range investigations.

The Engineering Department, in its new facilities, will explore advanced engineering problems to develop basic data on manufacturing and control equipment and construction materials.

Magazine Article Features Celanese Corp.

The vast, integrated activities of the Celanese Corp. of America are featured in a detailed article in the May issue of *Fortune* magazine. The article is illustrated with photos of company executives, scenes from various plants, and charts demonstrating the integrated activities of the concern.

South Carolina Mill Men Re-Elect Hammett

Members of the Cotton Manufacturers Association of South Carolina, meeting in Asheville, N. C., May 27-29, re-elected all officers for another term and were told that the industry was still far removed from the time when fear should have any place whatever in its business calculations. Dr. Claudius T. Murchison, president of the Cotton-Textile Institute, declared before the closing session of the group that "I see nowhere in our economic set-up any signs of weakness which have more than local and passing significance. On the other hand, every factor which is general and basic continues to be strong. In my opinion, we are still far removed from the time when fear should have any place whatever in our business calculations."

Lawrence O. Hammett of Chiquola Mfg. Co., Honea Path, S. C., and Orr Cotton Mills, Anderson, S. C., was re-elected president of the association for the third consecutive term. J. B. Harris of Greenwood (S. C.) Mills was re-elected vice-president and John K. Cauthen of Columbia, S. C., executive vice-president.

Directors re-elected were F. E. Grier of Abney Mills, Greenwood, S. C., and W. A. L. Sibley of Monarch Mills, Union, S. C. W. J. Erwin of Republic Cotton Mills Division, J. P. Stevens & Co., Inc, Great Falls, S. C., was named to the board to replace B. B. Gossett, retired manufacturer of Charlotte, N. C. Directors remaining in office are R. E. Henry of Dunean Mills, Greenville, S. C.; Walter S. Montgomery of Spartan Mills, Spartanburg, S. C.; Sam H. Swint of Graniteville (S. C.) Co.; Fred W. Symmes of Piedmont Plush Mills, Greenville; M. L. Cates of Arkwright (S. C.) Mills; C. B. Nichols of Appleton Co., Anderson, S. C.; and Ben F. Hagood of Glenwood Cotton Mills, Easley, S. C.

The export situation came in for comment from both Dr. Murchison and Dr. William P. Jacobs, president of the American Cotton Manufacturers Association. "It is your responsibility," Dr. Jacobs told the manufacturers, "to get across to your employees the severity of the world situation." Intelligent mill operators are being thoroughly integrated for the long pull ahead, he continued, and they are the ones who will get the merchandising breaks.

Dr. Jacobs stressed the importance of "more production at lower unit cost," declaring it was imperative that machinery manufacturers build the most modern machinery and keep it in this country. This new machinery, he emphasized, should be kept in America and the old machinery shipped overseas.

Referring to recent price adjustments in textiles, Dr. Murchison said these developments "do not indicate in the slightest any threat to the maintenance of sound and prosperous operations." Based on the assumption of a continuance of world peace, he predicted a period of profitable business for the industry through 1950.

In reporting the association's activities in the past year, Mr. Hammett stated that South Carolina's textile industry "has made great strides with respect to a more appreciative public attitude." This, he said, is evidenced by the many new plants built or planned throughout the state. He urged further steps by the manufacturers to "impress the state as a whole on the great contribution being made to South Carolina's economy by our industry."

G. Ellsworth Huggins of Martel Mills, New York, chairman of the Textile Mills Industry-wide Committee on Public Relations, called on the group for an expansion of this

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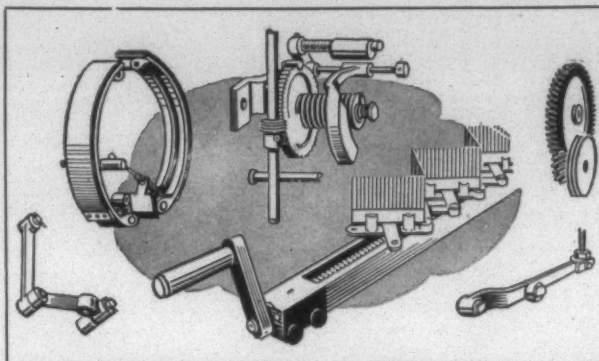


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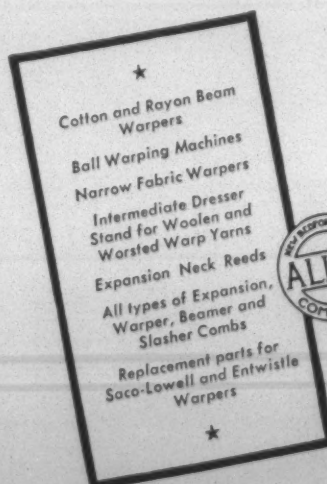


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program. Later, in a resolution offered by Ellison S. McKissick of Alice Mfg. Co., Easley, the membership went on record as favoring support of the public relations plan and authorized the formation of a South Carolina committee "to facilitate the conduct of the program."

Other speakers heard during the three-day convention were Col. Clyde Massey, head of the Atlanta Quartermaster Industrial Mobilization District; Guy B. Arthur, Jr., industry relations consultant of Toccoa, Ga., and former vice-president and personnel relations director of American Thread Co.; Dr. Ward Delaney, president of the Institute of Textile Technology at Charlottesville, Va.; and state Senator George Warren of Hampton, S. C., president of the South Carolina Bar Association.

The J. B. Sistine Foundation, meeting concurrently with the group, re-elected George M. Wright of Abbeville, S. C., president; R. H. Chapman of Spartanburg, vice-president; and Mr. Cauthen, secretary-treasurer.

A. Z. Wood of Springs Cotton Mills, Lancaster, S. C., won low gross honors in the group's annual golf tournament with a 77. Second prize, for low net score, went to Bob Chapman, son of J. A. Chapman of Riverdale and Inman Mills, Spartanburg, who posted a 77-16-61. Dick Swetenburg of Wellington Mills, Anderson, finished third in the tourney and fourth place honors went to Jim Bailey of Judson Mills, Greenville.

Four Colleges Graduate 234 Textile Students

Four Southern colleges this month presented degrees to a total of 234 textile graduates. The textile school at North Carolina State College, Raleigh, produced the largest crop of textile graduates, presenting degrees to 136. The school of textiles at Clemson College, Clemson, S. C., ranked second in this respect, graduating 70 textile students. The A. French School at the Georgia School of Technology, Atlanta, awarded degrees to 23 and a class of five students were graduated from Texas Technological College, Lubbock, Tex. A great majority of the graduates already have accepted positions in various textile plants, it is reported.

Diplomas and certificates were awarded graduates of the North Carolina Vocational Textile School, Belmont, N. C., June 9. W. M. McLaurine, director of foundations of North Carolina State College and former secretary of the American Cotton Manufacturers Association, addressed the graduation class and James L. Williams, director of industrial relations at Burlington Mills Corp., Greensboro, N. C., presented the diplomas and certificates.

Tufted Textile Group Elects T. J. Brown

The initial adoption of commercial standards for the bed-spread industry highlighted the three-day meeting May 27-29 of the Tufted Textile Manufacturers Associated at Daytona Beach, Fla. Thomas J. Brown of the Georgia Textile Corp., Calhoun, Ga., was elected president of the group to conclude what was described as the most successful and constructive meeting in the association's brief history. More than 300 manufacturers, suppliers and others allied with the industry, were in attendance.

The benefits of a commercial standard for the industry were discussed by Herbert A. Ehrman, chief of the textile section of the commodity standards division of the National Bureau of Standards. Mr. Ehrman discussed at length the

standard which had been drawn up and submitted to industry members for adoption. A number of chenille bedspread manufacturers dedicated themselves to a program that would insure the establishment of standards on the theory that if some step is not taken in this direction soon, the industry could undergo a deterioration that would be costly to all involved, the yarn and sheeting mills as well as the chenille manufacturers.

Some manufacturers were in favor of immediate action on standards, to approve whatever is feasible and then let the National Bureau of Standards get started as soon as possible, planning for additions and revisions as the industry can get together on these.

After considerable discussion, a standard sales contract for adoption throughout the industry was adopted in principle to be revised by a committee and submitted to the membership by mail. Size standards were adopted for bedspreads but color fastness standards were referred to a committee for further consideration.

Other officers elected at the close of the three-day convention included four new vice-presidents as follows: J. K. McCutchen, J. & C. Bedspread Co., Ellijay, Ga.; Ernest J. Moench, Tennessee Tufting Co., Nashville, Tenn.; A. B. Tenenbaum, Blue Ridge Spread Co., Dalton, and M. H. Berry of Berry Spread Co., Atlanta.

The following new directors were named: O. R. (Jack) Strain of Redwine & Strain, retiring president; Robert G. McCamy, Cabin Crafts, Inc., Dalton; Mrs. Mary Wilcox Reid, King Cotton, Inc., Dalton; J. T. Bates, J. T. Bates Candlewicks, Dalton; Jud Brooker, Brooker Bedspread Co., Dalton; Seymour J. Lorberbaum, Lawtex Corp., Dalton; Murray D. Lichtenstein, Morrill Mfg. Co., Chicago, Ill.; Ben Winkler, Dixie Belle, Calhoun; Dewey Wright, Crown Laundry & Dye Co., Dalton; Joe Dubrof, Carolyn Chenille, Chattanooga; W. E. Dellinger, Dellinger Spread Co., Rome, Ga., and Ira Rosen, LaRose Bedspread Co., Dalton.

The convention closed with the annual banquet, with Warren Foster of the Coca-Cola Co., Atlanta, as the principal speaker, and Mr. Strain, retiring president, as the toastmaster.

Prominent speakers heard during the convention included Frank A. Constangy, Atlanta attorney and labor relations expert; Henry C. Ball, executive secretary of the association; A. J. Bowles, Atlanta accountant; Mr. Strain, the retiring president; and R. Carter Pittman, Dalton, Ga., attorney and a past president of the group.

Alabama Textile Executives Hold Meeting

Problems encountered in the manufacture of textile goods were discussed at the annual Spring conference of the Alabama Textile Operating Executives held last month at Auburn, Ala. A. D. Elliott, general chairman of the group and manager and vice-president of the Huntsville Mfg. Co., presided. Other officers of the group are C. H. Moody, Dwight Mfg. Co., Alabama City, vice-general chairman; Ben H. Crawford, West Point, Ga., former professor of textile engineering at Auburn, secretary-treasurer.

Distribute Proposed Standard For Comment

The Commodity Standards Division of the National Bureau of Standards has distributed to the trade for consideration and comment copies of the Proposed Commercial Stand-

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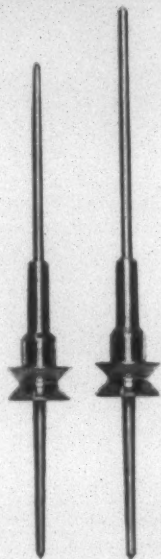
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ard for Water Repellent Textile Fabrics for Outerwear Apparel, TS-4584, as sponsored by the Textile Fabrics Association. The requirements of this draft are based on the results of extensive investigations by the American Association of Textile Chemists and Colorists; the Philadelphia Quartermaster Depot; the textile laboratory of the National Bureau of Standards and several private organizations.

The purpose of the standard is to provide standard methods of testing and rating the water repellency of textile fabrics which are by their nature resistant or have been treated to be resistant to penetration by water, as a basis for better understanding by the buyers and sellers. It was explained that it is not the purpose of this standard to cover coated textiles.

April Wool Stocks Below January Figure

Stocks of wool of the sheep in the United States held by manufacturers and topmakers, dealers, and the Commodity Credit Corp. on April 3 totaled 429.2 million pounds (scoured basis), according to preliminary figures released recently by the Bureau of the Census, Department of Commerce. This was 13.8 million pounds less than the quantity reported on Jan. 3 and 76.4 million less than the March 29, 1947, inventory.

Manufacturers and topmakers accounted for 215.3 million pounds or 50 per cent; dealers, 74.6 million, or 17 per cent; and the Commodity Credit Corp., 139.3 million (domestic wools), or 33 per cent of the total stocks on hand at the time of the April 3 inventory.

Apparel class stocks of wool totaled 346.5 million pounds, of which 216.2 million, or 62 per cent, were domestic and 130.3 million, or 38 per cent, were foreign. Carpet class stocks of wool totaled 82.7 million pounds. This was six per cent more than the quantity reported Jan. 3 but 12 per cent less than that for March 29, 1947. Manufacturers and topmakers held 68.0 million pounds, or 82 per cent of the carpet wool stocks.

Of the 38,587 woolen and worsted looms in place, 33,223, or 86 per cent, were in operation one or more days during the March period. These looms were operated at an average of 2.6 million hours per week, or three per cent lower than for the previous month but two per cent higher than for March, 1947. There were 1,563,455 woolen spinning spindles in place and 1,319,841, or 84 per cent, were active sometime during March. These were operated at an average of 98.9 million hours weekly, a level of activity four per cent below that for February and slightly below that for March, 1947. The weekly average hours for woolen spinning spindles in different types of mills for the month of March were: woolen mills, 81.1 million; knitting mills, 4.9 million; and carpet mills, 12.9 million.

There were 1,924,721 worsted spinning spindles in place and 1,792,456, or 93 per cent, were in operation some time during the March period. These spindles were operated at an average of 129.3 million hours per week which was three per cent lower than the weekly average for February but six per cent higher than the 122.1 million average hours reported for March of last year. Bradford spindles were operated at an average of 86.1 million hours per week and French spindles at an average of 43.2 million. Of the 2,653 worsted combs in place, 2,497 were active some time during the period. These combs operated at an average of 250 thousand hours per week which was practically the same as

the average for the previous month but two per cent above the average for March, 1947.

Consumption of wool of the sheep averaged 14.3 million pounds (scoured basis) per week during March. This quantity was two per cent below the average for February and three per cent less than that for March, 1947. Apparel class wool accounted for 10.2 million pounds and carpet class for the remaining 4.1 million. Of the 10.2 million pounds of apparel class wool, 3.5 million, or 34 per cent, were consumed on the woolen system and 6.7 million, or 66 per cent, on the worsted system. Compared with the weekly averages for February, there was a four per cent decrease in the quantity of apparel class wool consumed on the woolen system and a five per cent decrease in that consumed on the worsted system.

All fibers consumed in the manufacture of yarns on the woolen and worsted systems averaged 18.3 million pounds per week during March. This was two per cent less than the average weekly quantity consumed during February but slightly more than the average during March, 1947.

Fibers consumed in the production of "other than carpet" yarns averaged 13.4 million pounds per week; 7.9 million on the woolen system and 5.5 million on the worsted. The relative quantities consumed on the woolen system were as follows: wool of the sheep, 44 per cent; other wool, 22 per cent; reprocessed wool, 16 per cent; reused wool, four per cent; rayon staple, three per cent; other rayon, three per cent; cotton, seven per cent; and all other fibers, one per cent. Tops from wool of the sheep accounted for 91 per cent of the fibers used in the production of yarns on the worsted system. Fibers consumed in the production of carpet and rug yarns on the woolen and worsted systems averaged 4.9 million pounds per week. Wool of the sheep accounted for 84 per cent of the fibers spun on the woolen system.

Top production, averaging 6.7 million pounds per week in March, was almost the same as the weekly average for February. Tops from wool of the sheep accounted for 93 per cent of the March production; mohair, three per cent; rayon, two per cent; and all other fibers, two per cent. Noils produced from wool of the sheep accounted for 93 per cent of the 1.1 million pound weekly average production of all types of noils.

Yarns spun on the woolen and worsted systems during March averaged 16.5 million pounds per week. This quantity was two per cent below the average for February but slightly higher than the weekly average for last March. "Other than carpet" yarn production averaged 12.8 million pounds per week; 7.3 million, or 57 per cent, on the woolen system; 4.2 million, or 33 per cent, on the Bradford system; and 1.3 million, or ten per cent, on the French system. Carpet yarns, produced principally on the woolen system, averaged 3.8 million pounds weekly. This quantity was slightly below the production for February but was 20 per cent above the weekly average for March, 1947.

Woolen and worsted fabric production during the first quarter of 1948 totaled 131.9 million finished linear yards, a quantity two per cent more than that produced during the fourth quarter of 1947. Apparel fabrics accounted for 116.2 million linear yards, or 88 per cent of the total production. Of the 112.9 million linear yards of apparel fabric produced for other than government orders, 55.0 million, or 49 per cent, were classified as men's and boys' wear fabrics; 49.3

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million, or 44 per cent, as women's and children's wear; 8.6 million, or 7.0 per cent, reported by cotton and rayon weavers could not be classified in either of these categories.

Non-apparel fabric production of 15.7 million linear yards was three per cent above the quantity reported for the previous quarter, but 16 per cent below that for the first quarter of 1947.

Textile Export Association Elects DeMin

William DeMin, president of Manufacturers Textile Export Co., was elected president of the Textile Export Association of the United States at its 18th annual meeting June 10. He succeeds N. S. W. Vanderhoef, president of Turner Halsey Export Corp, who was named chairman of the board. John H. Judge, president of G. A. Stafford & Co., and William C. Planz, vice-president of Neuss Hesslein & Co., were named vice-presidents. John W. Murray was re-elected secretary-treasurer. Mr. Vanderhoef and Mr. Planz were re-elected members of the board along with William Brune of Brune, Nadler & Cuffe and Harold N. Pratt of South-eastern Cottons, Inc.

Association activities during the past year were reviewed by Mr. Vanderhoef in his president's address, and attention was given to problems likely to be faced in the future. He stated, in part: "We have come to the end of a year which will probably go down as one of the most prosperous in the history of the American textile export trade. The bare statistics covering this period are in themselves impressive and constitute an achievement of which all of us should be proud. During the calendar year 1947, we exported 1,470,146,962 square yards of cotton textiles valued at \$525,407,-

318; 92,112,219 pounds of cotton yarns valued at \$89,689,700 and 252,687,000 square yards of rayon goods valued at \$181,760,000. These figures ought to be remembered, for they represent what on all sides is regarded as the volume that must be shipped abroad to enable the textile industries of which we have become so important and essential a part to maintain production at current levels."

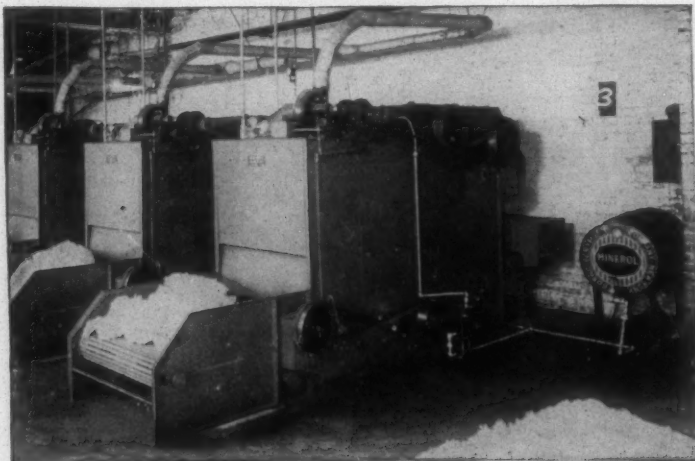
Guest speakers heard during the association's meeting were C. T. Muchison, president of the Cotton-Textile Institute, and C. W. Bendigo, editor of *Textile World*.

Minimum Textile Wage Hearing July 8

Notice has been given of a public hearing to be held July 8 to consider a proposal to increase the minimum wage determination under the Walsh-Healey Public Contracts Act for the textile industry from the present 40 cents an hour to 87 cents an hour. The hearing, scheduled by William R. McComb, administrator of the Wage and Hour and Public Contracts Divisions, U. S. Department of Labor, will be held in Room 7129 of the Department of Labor Building, Washington, D. C., beginning at 10 a. m.

Requested by the Textile Workers Union of America, the hearing also will afford interested parties an opportunity to testify with respect to the desirability of establishing special provisions for the employment of apprentices and learners at rates lower than the proposed minimum. Evidence obtained at the hearing will be submitted to the Secretary of Labor, who determines the prevailing minimum wage on an industry basis for performance on government contracts in amounts over \$10,000, to which the Public Contracts Act applies. The present minimum wage for the textile industry,

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as defined in the determination, was established on May 25, 1942. It is estimated that there are approximately 800,000 wage earners in the industry.

First Quarter Finishing Activity At Peak

A total of 2,371 million linear yards of cotton rayon, nylon, and other woven fabrics was bleached, dyed or printed and finished during the first quarter of 1948, according to the Bureau of the Census, Department of Commerce. This was the highest quarterly production reported since this series began in the first quarter of 1943 and showed small gains over both the fourth quarter of 1947 and the first quarter of 1947.

The data were compiled from reports filed by finishers bleaching, dyeing, or printing cotton, rayon, silk, nylon, and other synthetic broad woven fabrics. All known finishers were canvassed. Approximately seven per cent of the total yardage was estimated for companies whose reports were not received in time for tabulation.

Statistics show that a total of 1,872 million yards of cotton fabrics was bleached, dyed, or printed and finished in the first quarter of 1948, an increase of three per cent over the first quarter of last year. Processing of rayon, nylon and similar fabrics amounted to 499 million yards, which was seven per cent greater than in the first quarter of 1947.

Of 1,021,000,000 yards of bleached and finished in the first quarter, 94 per cent was cotton, five per cent rayon and one per cent other fabrics; it was revealed at the week-end by the Census Bureau in a breakdown of January-March finishing activity, previously released.

The 78,000,000 yards of colored yarn fabrics bleached and finished during first quarter of 1948 was 31 per cent greater than in the first quarter of 1947.

Combed and carded broadcloth also showed an increase from 42,000,000 yards in the first quarter of 1947 to 74,000,000 yards in the first quarter of 1948.

Of the 822,000,000 yards dyed and finished, cotton fabrics made up 58 per cent and rayon fabrics, 40 per cent. In the first quarter of this year, a total of 35,000,000 yards of broadcloth was reported dyed and finished, double the quantity reported in the first quarter of 1947.

Fabrics showing the greatest decreases from the first quarter of 1947 were drills, twills and jeans, duck, osnaburgs and poplins, reps, and piques.

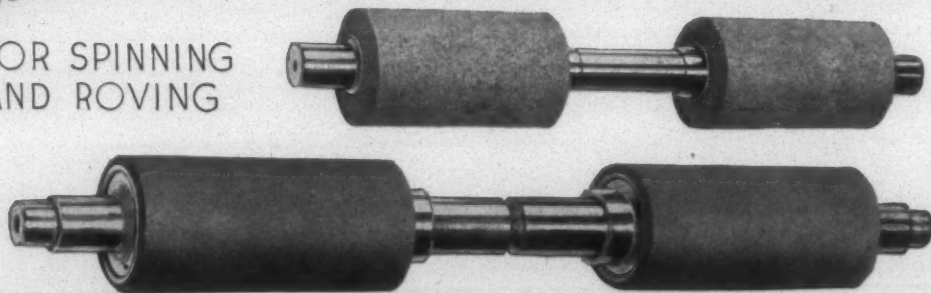
A total of 527,000,000 yards was printed and finished in the first quarter of 1948, of which 82 per cent was cotton and 17 per cent rayon.

Rayon Broad Woven Output At New High

Rayon broad woven fabric production amounted to 538 million yards in the first quarter, 1948, according to the Bureau of the Census, Department of Commerce. This was the greatest quarterly production reported since this series began in 1943 and was 16 per cent greater than in the first quarter, 1947. The production of 338 million yards of 100 per cent filament rayon fabrics was 18 per cent greater than in the corresponding period a year ago, while the production of 100 per cent spun rayon fabrics in the first quarter, 1948, was almost double that of the first quarter, 1947. The production of silk, nylon, glass, and other similar fabrics

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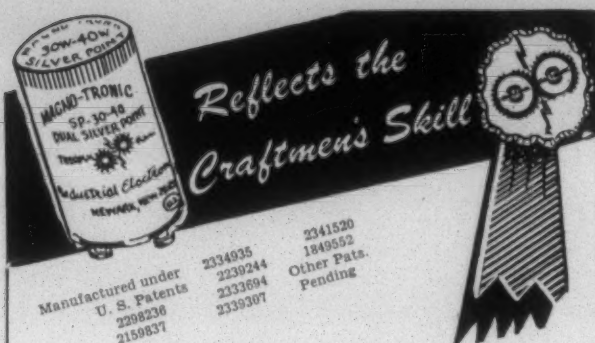
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amounted to 17 million yards, 20 per cent more than in the fourth quarter, 1947, but seven per cent less than in the first quarter, 1947.

SUMMARY OF PRODUCTION, BY CLASS OF FABRIC

Type of fabric	Jan.- March, 1948	Oct.- Dec., 1947 (Revised)	Jan.- March, 1947	Pt. Change Jan.-March, 1948 from—	
				Oct.- Dec., 1947	Jan.- March, 1947
				(thousands of linear yards)	
Rayon broad woven fabrics, total	537,900	515,951	463,188	+ 4	+ 16
100 per cent filament rayon fabrics	338,383	326,903	287,905	+ 4	+ 18
100 per cent spun rayon fabrics	98,424	95,117	50,891	+ 3	+ 93
Combination filament and spun rayon fabrics	48,984	46,084	48,457	+ 6	+ 1
Pile, upholstery, drapery, tapestry, and tie fabrics	12,261	11,981	12,013	+ 2	+ 2
All other rayon mixtures	39,848	35,866	63,942	+ 11	- 38
Silk, nylon, glass, and other fabrics	16,680	13,946	17,841	+ 20	- 7

The production of 174 million yards of flat fabrics and 165 million yards of twisted yarn fabrics made of 100 per cent filament rayon yarn was the greatest quarterly production reported since the data on these two groups were first collected separately in the first quarter, 1945. Almost all of the 100 per cent filament rayon fabrics showed an increase over the first quarter, 1947. All of the spun rayon fabrics showed increases over the first quarter, 1947, with the first quarter, 1948, production of twills and challis being almost triple that of the first quarter, 1947. Production of combination filament and spun rayon fabrics in the first quarter, 1948, was approximately the same as that a year ago. The production of six million yards of 100 per cent nylon fabrics was 28 per cent above the fourth quarter, 1947, but 22 per cent less than in the first quarter, 1947.

There were 107,370 looms in place on April 3, of which 94 per cent were active on the first shift, 88 per cent on the second shift, and 63 per cent on the third shift. The 150 million loom hours operated in the January-March, 1948, period was four per cent above the previous quarter.

Industrial Trainers Association Is Growing

New, but growing in membership and importance, is the Carolina Industrial Trainers Association, which was organized originally as the Textile Trainers Association in Columbia, S. C., Oct. 23, 1946, with only nine persons in attendance.

Following World War II, many of the Southern industrial plants saw the need for intensive training within their plants. This led towards the employment of personnel to foster such programs and those engaged in this type of work, feeling the need for co-operative and united action, formed the Textile Trainers Association with the following officers: Walter B. Jones, at that time with Pacific Mills in Columbia and now with Monarch Mills, Union, S. C., president; J. Harvey Frick of Self Mills, Greenwood, S. C., vice-president; and Marvin B. Self of Drayton Mills, Spartanburg, S. C., secretary.

While the majority of the industrial trainers came from the textile industry, it soon became apparent that all industries should be represented in the group. Therefore, the constitution and by-laws were amended to change the name to Carolina Industrial Trainers Association and all personnel interested in training within industry were urged to join the organization in order to bring about mutual help and co-operation.

Meetings over the period since organization have been held quarterly and an interesting and worthwhile program

pertaining to training within industry was held at each meeting. Officers of the group at the present time are: J. Harvey Frick, training director and safety engineer, Mathews Mill, Greenwood, S. C., president; Marvin B. Self, training director, Drayton Mills, Spartanburg, S. C., vice-president; and S. C. Thomas, assistant training director and veterans guidance officer, Graniteville Co., Graniteville, S. C., secretary-treasurer.

The roster of members, as of November, 1947, included: Grady S. Brooks of Pacific Mills, Lyman, S. C.; Addison B. Carwile of Abbeville Mills Corp., Abbeville; Mr. Frick; W. A. Hawn of Graniteville Co., Graniteville; Mr. Jones; Horace L. Pratt of Columbia Mills, Columbia; Harold Harrelson of Stonecutter Mills, Spindale, N. C.; Mr. Thomas; Mr. Self; T. J. Trowell of Pacolet (S. C.) Mfg. Co.; Arthur Goforth of Pacolet (S. C.) Mfg. Co.; John A. Reagan, Jr., of Sonoco Products Co., Hartsville, S. C.; Rex Parrott of Sonoco Products Co., Hartsville; John K. Compton of Duncan Mills, Greenville; L. E. Drummond of Seminole Mills, Clearwater, S. C.; G. D. Pryor of Pacific Mills, Columbia; Richard O. Hartman of Riegel Textiles, Ware Shoals, S. C.; C. L. Geddings of U. S. Rubber Co., Winnsboro, S. C.; J. W. Jelks of U. S. Rubber Co., Winnsboro; and Homer E. Elmore of Jackson Mills, Wellford, S. C.

From the efforts being put forth by those interested in this organization it is felt that there should develop in the Carolinas an association of men engaged in industrial training that will grow into an organization long needed in this section of the country. Personnel managers, training directors and supervisors and others interested in training are urged to contact officers of the association regarding its work, time and place of meetings.

Personnel Testing Institute Held in Georgia

A three-day personnel testing institute, believed to be the first held in the South, was conducted recently at the Georgia School of Technology, Atlanta, with 45 personnel managers from Georgia cotton mills in attendance. The institute was arranged by the Engineering Extension Division of which Dr. R. S. Howell is director. Sponsored by the Personnel Managers' Division of the Cotton Manufacturers Association of Georgia, it was conducted by the psychology department of Georgia Tech.

The newest type of tests given prospective and new workers to determine their personality, aptitudes, initiative and technical abilities were taken by the mill men themselves. They graded their own papers and discussed each phase of the test. Another institute is planned at Georgia Tech this Fall, when it is expected that personnel managers from other states will be included.

Summary Of Cotton Broad Woven Production

A total of 2,587 million linear yards of cotton broad woven goods (except tire cord and fabric) was produced during the first quarter, 1948, according to the Bureau of the Census, Department of Commerce. This was the largest quarterly production reported since the second quarter, 1943, and was four per cent above the first quarter, 1947. Tire cord and fabric production amounted to 149 million pounds, of which 59 per cent was cotton and 41 per cent rayon and nylon. Almost all groups of fabric showed an increase over the first quarter, 1947. The production of 57

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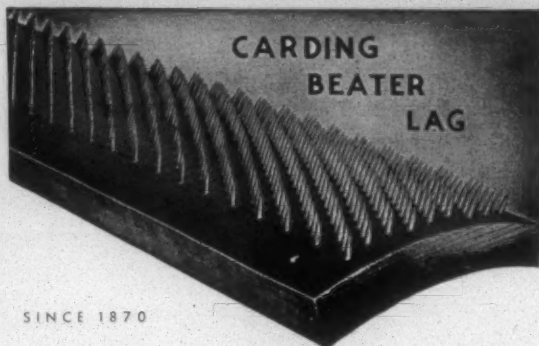


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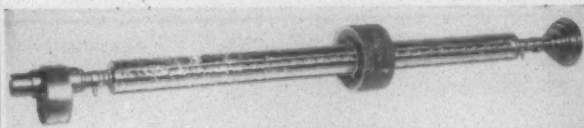
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million yards of duck was 25 per cent above the fourth quarter, 1947, but was 18 per cent below the first quarter, 1947.

The increase in duck production in the first quarter, 1948, was due chiefly to the increase in production of flat duck which increased from 21 million yards in the fourth quarter to 28 million yards in the first quarter, 1948. Sheetings, narrower than 42 inches, decreased from 335 million yards in the fourth quarter, 1947, to 314 million yards in the first quarter, 1948. Most of the drop occurred in the Class B sheetings. The narrow sheetings showed an increase of 39 million yards over the first quarter, 1947, with the majority of this increase being in the Class C sheetings.

The production of 869 million yards of print cloth fabrics was 11 per cent greater than in the first quarter, 1947. The 39-inch 68x72, 4.75 yard, print cloth production was double that in the first quarter, 1947, and the 87 million yards of 39-inch 80x80, 4.00, yard print cloth was 69 per cent greater than in the first quarter, 1947. Production of carded broadcloth in the 100x60 and 80x60 count groups was more than double that of a year ago.

In the fine cotton goods group, the combed and part combed broadcloth production increased from 28 million yards in the first quarter, 1947, to 51 million in the first quarter, 1948. Lawns and organdies also showed a large increase but marquisettes decreased from 66 million yards in the first quarter, 1947, to 60 million yards in the first quarter, 1948. Production of towels and towelings remained almost the same as in the first quarter, 1947.

Of the 390,514 looms in place on April 3, 1948, 98 per cent were active on the first shift, 93 per cent on the second shift, and 52 per cent on the third shift. The 536 million loom hours operated was one per cent more than in the fourth quarter.

May Rayon Shipments Show Increase

Shipments of rayon yarn and staple in May totaled 93,600,000 pounds, as compared with 90,800,000 pounds in April and 78,100,000 pounds in May, 1947, according to the current issue of *Rayon Organon*, published by the Textile Economics Bureau, Inc. Domestic rayon deliveries in the first five months of the year, totaling 447,600,000 pounds, showed an increase of 17 per cent over the corresponding period of 1947.

May filament yarn shipments amounted to 69,900,000 pounds of which 46,100,000 pounds were viscose+cupra and 23,800,000 pounds were acetate. Domestic rayon staple and tow shipments in May totaled 23,700,000 pounds comprising 16,200,000 pounds of viscose and the balance acetate. Rayon stocks held by producers at the end of May amounted to 12,400,000 pounds. Viscose+cupra yarn inventories amounted to 6,300,000 pounds; acetate yarn, 2,400,000 pounds; and staple, 3,700,000 pounds.

An analysis of world output of rayon yarn and staple completed by the *Organon* reveals that in 1947, a total of 1,990,710,000 pounds were produced, an increase of 19 per cent over the previous year. Filament yarn output in 1947 reached a new all-time peak, exceeding the previous record made in 1941 by four per cent. Rayon staple production also showed an increase over 1946 but was still less than half the record output of 1941.

"It is doubtful," the *Organon* states, "if many of the world's major industries have shown a post-war recuperative power equal to that of the rayon industry." In 1945, the

Organon goes on to say, world rayon filament yarn output had receded to about 900,000,000 pounds. Last year's output amounting to 1,310,835,000 pounds was 46 per cent above this level. Little of the post-war recovery, the *Organon* points out, has up to this point been accomplished with the aid of Germany or Japan who, in 1937, accounted for 39 per cent of the world total. Last year, these two countries had an aggregate production amounting to only four per cent of the world output.

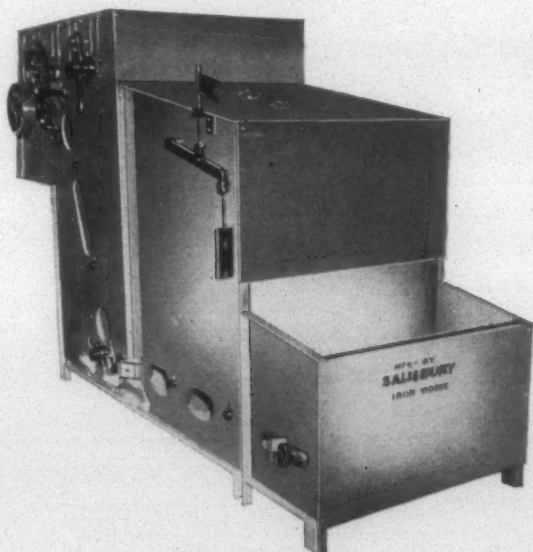
The advance in filament yarn production is world-wide, with new peaks being attained by North and South American countries, and European producers moving ahead at a greatly accelerated pace. Even Japan showed a moderate improvement. Total European production of rayon filament yarn in 1947 was especially striking in the face of unsettled social, political and economic conditions. Output on the continent amounted to 476,675,000 pounds, 35 per cent above 1946 and more than double the 1945 figure. New all-time production records were set by Belgium, Finland, France, Great Britain, Greece and Switzerland, while several other countries equalled or bettered their pre-war levels.

Italy's rayon filament yarn industry went forward at an amazing rate with an output of 115,000,000 pounds, 77 per cent above 1946 and only ten per cent below the peak 1941 level. Compared with 1946, Holland's production was up 61 per cent; Poland, 51 per cent; and Czechoslovakia, 40 per cent. All other European producers reached higher levels except Norway, Spain and Sweden but even in these countries the loss was slight compared to the previous year.

In the Western Hemisphere, production reached a total of 817,175,000 pounds of filament yarn with the United States, the world's largest producer, contributing 747,000,000 pounds. New record production marks were set by six other rayon yarn producing countries in North and South America. Peru's output in 1947 was ten times greater than in 1946, while Mexico's production was up six times. The gain in Canada was 26 per cent; Chile, 15 per cent; Colombia, 12 per cent; and Argentina, 11 per cent. Brazil was the only country showing a decline but it was a very small one.

Japan produced 16,305,000 pounds of filament yarn in 1947 as against 9,030,000 pounds in the previous year. By the end of 1948, if plant rehabilitation goals are reached, Japan is expected to have a registered filament yarn capacity of about 100,000,000 pounds.

Rayon staple production in 1947 made good progress but came nowhere near the record level. World-wide staple output last year amounted to 679,875,000 pounds, 19 per cent above 1946 but 56 per cent under the 1941 peak. Low operating rates in Germany and Japan, two of the largest pre-war producers, were influential in limiting the advance in output. Despite the depressed production level in Germany, European staple output last year increased 15 per cent over 1946 and reached a figure of 428,260,000 pounds. New all-time output levels were reached by Czechoslovakia, Finland, Great Britain, Holland, Norway and Spain. Staple output in Italy increased 62 per cent; Poland, 38 per cent; and France, 24 per cent. Germany showed a loss of 18 per



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Model S BF-1 Salisbury Enclosed Cotton Blending Feeder is used for the processing of cotton, wool, and synthetics.

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The Salisbury Enclosed Blending Feeder has a heavy fabricated steel frame which makes it a rugged, durable, and trouble free unit. All gears and chains are covered with guards for safety.

Oilite bronze self-aligning bearings are used throughout, eliminating oil leakage and assuring clean fibres.

Provisions are made for the installation of automatic sprinkler head and vacuum lines. All usable waste fibres may be reclaimed from waste container.

Salisbury Blending Feeders are designed to allow installation of kick-off roll or combing attachment.

The machine may be used in a blending line or in combination with a picker.

This model is provided with ample storage space. This facilitates better blending of various fibres and requires less attention from the operator.

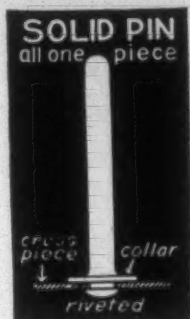
Model S BF-1 as shown is equipped with a lower or front apron which extends outside the storage chamber of the machine and has a small bin into which the raw material is placed by the operator. It is then carried into the storage chamber on the conveyor apron. This model also has a combing attachment as standard equipment.

This machine is manufactured of the finest material and workmanship and has proven its worth by satisfactory, trouble free operation.

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cent; Sweden, 12½ per cent; Switzerland, ten per cent; and Belgium, five per cent.

In the Western Hemisphere, combined staple production amounted to 232,365,000 pounds, an increase of 30 per cent over the preceding year. The United States maintained its position as the world's largest producer and accounted for 34 per cent of global output. Canadian production was up 300 per cent, and Brazil 69 per cent. On the other hand, Argentina showed a decline of 45 per cent.

Japanese output of staple in 1947, owing to raw material shortages and emphasis on revitalizing filament yarn facilities, showed a loss for the year. In Germany, 51 per cent of staple production came from the Soviet zone for occupation, 47 per cent from the bizon area (U. S. and U. K.) and two per cent from the French zone. On the other hand, German filament yarn production was divided as follows: 66 per cent from the bizon area; 18 per cent French; and 16 per cent Soviet.

Only fragmentary information exists on the activities of rayon producing units in the U. S. S. R. and the Soviet-controlled areas of Korea and Manchuria. There is sufficient data available, however, to conclude that Russia is pushing the rehabilitation of war-damaged rayon producing units and is planning to expand capacity. Exact details, however, on progress of rehabilitation or the extent of new construction are not known. In the Soviet controlled zone of Germany, it is reported that the ownership of all rayon producing plants has been transferred to the state in accordance with Soviet policy of nationalizing all industry. Similar action has been taken by Poland on former German owned rayon plants in that part of pre-war Germany now merged with Poland.

The potential global producing capacity for both filament and staple, according to the *Organon*, is estimated at about 3,333,000,000 pounds by the end of 1948.

Narrow Fabrics Directory Is Published

The Narrow Fabrics Division of the Cotton-Textile Institute is now distributing a directory which lists sources of supply for all types of both elastic and non-elastic narrow fabrics including automobile trimmings, apparel and industrial belting; braided products, fringes, tassels and cords, tubular woven hose fabrics, woven labels, laces, braided shoe threads, tapes, trimmings, and passementeries, webbing and wicking.

The directory also contains a list of definitions and the rules of the narrow fabrics industry. At present, more than 400 mills are engaged in the manufacture of narrow goods for which there are several thousand end-uses. Copies of the directory may be obtained free by writing to the Cotton-Textile Institute, 271 Church Street, New York 13, N. Y.

Yarn Group Has Annual Outing

Members and guests of the Carolina Yarn Association enjoyed a variety of sports at the annual outing of the group held May 13-16 at Pinehurst, N. C. As usual, the weather was ideal and the two major attractions, golf and skeet, attracted a record number of participants. Prizes were awarded at a banquet Saturday evening, May 15.

The golf tournament this year was played over the No. 2 and No. 3 courses. Tees on the long No. 2 course were moved up a few yards but this slight concession did not prevent slices and hooks from finding the cavernous traps

for which this tough course is noted, and many scores mounted to unusually high levels.

Hill Wellford of the E. I. du Pont de Nemours Co., Inc., Charlotte, N. C., carding 183-52-131 for the No. 3 and championship No. 2 courses, copped low net and choice of prizes in the annual golf tournament. He was presented the association cup to retain until next year's tourney and selected a set of matched irons. Prizes to winners of the event, highlight of the group's three-day outing, were awarded at the annual banquet by Joe Foil, Hickory Throwing Co., Greensboro, N. C., co-chairman of the golf committee.



Golf winner Hill Wellford receiving cup from J. H. Mason, president of the Carolina Yarn Association.

Second-place honors went to Bill Sharp, Chadbourn Hosiery Mills, Charlotte, with 151-16-135, who also won the top prize for left-handed golfers. George Rounds, Indus-

trial Rayon Corp., Cleveland, with 194-58-136, and Walter Schoeneman, Archdale (N. C.) Mfg. Co., 203-66-137, captured third and fourth spots in the low net field.

W. W. Wood, du Pont fired 150-6-144 over the par 143 stretch to bag low gross in the tourney. Two strokes behind was Al Bensing, McCrary Hosiery Mills, Asheboro, N. C., 152-4-148, and Bill Yates, Johnston Mills Co., Charlotte, 153-12-141, was in third place. Fourth low gross was won by I. E. Pennington, Fayetteville (N. C.) Knitting Mills, 154-4-150. Other scores follow:

Hitting 71 out of a possible 75, Joe Bales of Maurice Mills, Thomasville, N. C., won the annual skeet shoot at the Carolina Yarn Association's outing. Winners in five classes were presented prizes by Bill Dodson of Smith, Drum & Co., Philadelphia, chairman of the skeet committee.

Other winners in Class "A" were Alex Hanes, American Viscose Corp., Charlotte; Mr. Dodson; Jack Holbrook, American Yarn & Processing Co., High Point, N. C.; Hazel Hardin, Triangle Hosiery Co., High Point, N. C.; and Dave Long, Amazon Cotton Mills, Thomasville, N. C.

Winners in Class "B" were Jack Thomas, Thomas Mills, High Point, N. C.; Aubrey Hoover, Hoover Hosiery Co., Concord, N. C.; Beale Faucette, Scott & Williams, New York; Amos Ragan, Ragan Knitting Co., Thomasville, N. C.; George Johnston, Textiles, Inc., Chattanooga, and Joe Mason, Industrial Rayon Corp., Greensboro, N. C.

In Class "C," prizes went to Nathan Ayers, Triangle Hosiery Co.; Hugh Merritt, Renfro Hosiery Mills Co., Mount Airy, N. C.; Dick Grey, Caswell Knitting Mills, Yanceyville, N. C.; W. H. Curlee, Amazon Cotton Mills,

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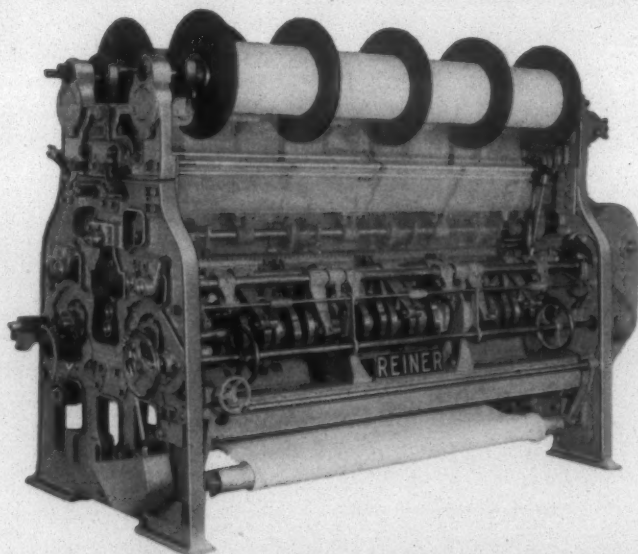
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Thomasville, N. C., and Jim Rodgers, James E. Taylor & Co., Charlotte.

Class "D" winners were E. W. Freeze, Commonwealth Hosiery Mills, Randleman, N. C.; R. S. Small, Ottaray Textiles, Greenville, S. C.; W. H. McDonald, Southern Mercerizing Co., Tryon, N. C.; Hugh Justice, Vance Knitting Mills, Kernersville, N. C., and George Mauney, Mauney Mills, Kings Mountain, N. C.

Bill Yates, Johnston Mills Co., Charlotte, led the list in Class "E." Other winners were Russell Hodges, Wilkes Hosiery Mills Co., North Wilkesboro, N. C.; Ed Reid, Sonoco Products Co., Hartsville, S. C.; Paul Mauney, Neisler Mills, Kings Mountain, N. C., and Norman Cocke, Jr., American Viscose Corp., Charlotte.

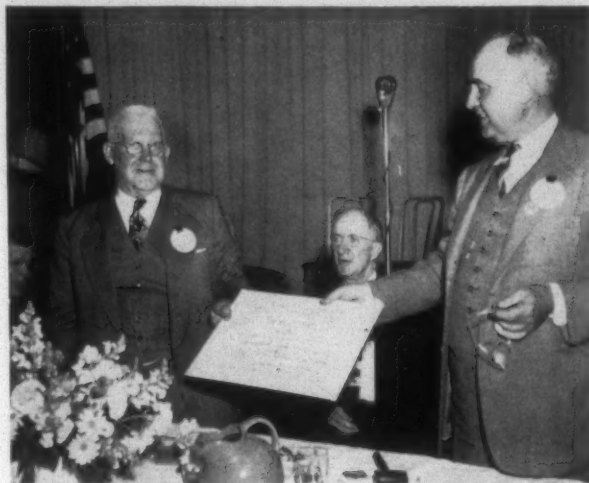
New Bedford Textile Institute Golden Jubilee

One of the highlights of the three-day celebration of the golden jubilee of the New Bedford (Mass.) Textile Institute May 13-15 was the presentation of a gift of \$1,000 to Dean George Walker, president of the institute. The gift from the alumni was made to Dean Walker in appreciation of his untiring and devoted interest in the welfare of the institute during his many years of service, first as a trustee and later as dean. Dean Walker, in his acceptance speech said that \$500 of his gift will be donated as a personal contribution to the fund to establish the Samuel Ross Memorial Library at the institute. The library is to honor the late Samuel Ross, who was largely responsible in making possible the establishment of the New Bedford Textile Institute.

More than 400 graduates from many sections of United States, Canada and Cuba returned to their alma mater for the great celebration. The successful jubilee was featured by class reunions, fraternity open house, a golf tournament, a clam bake and the jubilee banquet.

Seated at the head table at the jubilee banquet were Rudolph C. Dick, president of the Naumkeag Steam Cotton Co. of Salem, general chairman of the golden jubilee program; John H. Grady of the Calco Division of the American Cyanamid Co., serving as toastmaster; Russell T. Fisher, president of the National Association of Cotton

Manufacturers; William Karl, president of Firestone Textiles, winner of the Cotton Manufacturers Medal at the institute in 1919; Harold B. Sturtevant of the Rhode Island School of Design, alumni historian; Commissioner of Education John J. Desmond, Jr., ex-officio member of the board of trustees; Lieutenant George C. Olsson, representing Governor Bradford; Dean Walker, Mayor Harriman, Allan Barrows, treasurer of the Gosnold Mills Corp.; Wright Bolton, Jr., agent of the Soule Mills; James Bolton, agent of the Gosnold Mills Corp.



One of the highlights of the three-day golden jubilee of the New Bedford Textile Institute was the presentation of a gift of \$1,000 from alumni. Dean George Walker of the institute is shown at left receiving the gift from John H. Grady, president of the New Bedford Textile Institute Alumni Association, as Mayor Arthur Harriman of New Bedford looks on.

Seated at other tables in the ballroom and singled out by Mr. Karl as graduates of the institute and now associated with Firestone Textiles were Joseph J. Harney, general manager of the company's plant in New Bedford; Eugene Sweeney, general manager of the company's plant in Woodstock, Ont.; Francis Galligan, general manager of the plant in Bennettville, S. C.; Malcolm Richardson, Roger Karl and Clifford Ross, also with Firestone Textiles. Included among others in the blue ribbon list of visitors were James Adams, general superintendent of the Dionne Spinning

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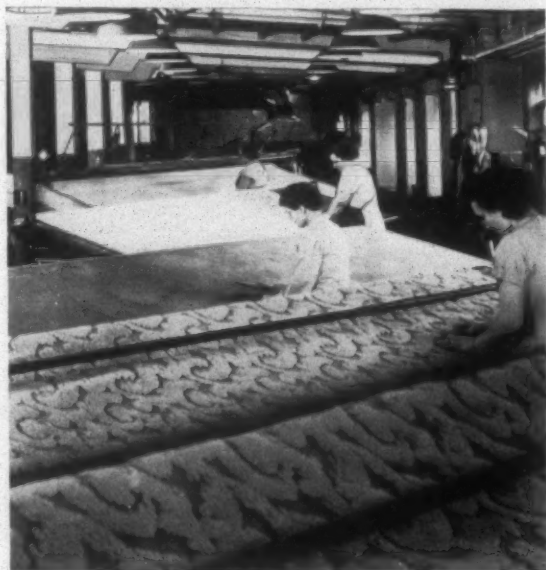
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Co., and Prof. Albert H. Grimshaw, a former instructor at the institute and now at North Carolina State College.

Russell Fisher delivered the main address of the evening. His address was a history of textiles from the time cotton yarn was spun between 4,000 and 5,000 B. C. down to the present time when the industry is using not only cotton, but wool, silk and rayon and more recently a whole new family of fibers.

Dean Walker told of plans for the expansion of the institute and adding a four-year course leading to a degree for those who complete it. This, he added, will make it possible for the institute to give even greater service than it has been able to provide in the past. The alumni re-elected John H. Grady president. Other officers elected were Harold B. Sturtevant, vice-president; Harold Horton, second vice-president; Edmund Dupre, secretary; Louis Fenaux, assistant secretary, and Francis Tripp, treasurer.

New Use For Nylon In Luxurious Carpet



Inspecting nylon carpet at the plant of Nye-Wait Co., Auburn, N. Y.

Versatile nylon enters another field in the first carpet on the market with pile completely woven of Du Pont nylon. Manufactured by the Nye-Wait Co., Auburn, N. Y., under the name Splendante, it offers a luxurious floor covering that should endure for many years to come. Nylon's remarkable strength, abrasion-resistance and cleanability promise long enjoyment of a fine quality carpet, new in texture and design as well as in fiber content.

Based on a new concept of weaving, Splendante attains dramatic contrasts of pile height, giving a bas-relief effect to the scroll-like pattern. Because nylon is easily cleaned with soap and water, the carpet responds readily to shampoo treatment. When sent to a reputable cleaning establishment, it will come back with renewed freshness, unimpaired appearance and unchanged dimensions. Pre-shrunk to exact specifications during manufacture, the carpet will retain its original width and length through repeated shampooing. Spot cleaning can often be accomplished without taking up the carpet, since nylon is unharmed by standard cleaning solvents.

As a protection against danger of fire, the non-flammability of the pile is a dependable safeguard. Nylon will not

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support the spread of flame and the manufacturer states that the dyes and finishes used are also non-flammable. When exposed to flame, the pile will melt but is self-extinguishing when the flame is removed. The fact that improperly dyed and finished nylon may burn was fully understood in producing this carpet and care was taken to avoid such treatment. When stored, the new carpet will need no special protection from moths. If put away clean, it will not be attacked by these destructive pests. Nylon itself has no attraction for them.

All these properties of nylon, coupled with weaving skill, make the development of Splendante an important event in carpet history. Nye-Wait, long known for high quality carpets, spent eight years of research in perfecting the type of weave, and designed and built special looms to carry out their conception.

Issued in a limited edition, like a rare book or etching, the new nylon carpet is registered in the name of each owner, who will be presented with a parchment certificate inscribed with his name and the recorder number. Each scroll is signed by the president of Nye-Wait Co. and entitles the owner to return the carpet to the manufacturer for its first shampooing.

L. T. I. Alumni Association Holds Meeting

The recent meeting of the Lowell (Mass.) Textile Institute Alumni Association, held at the institute, featured the presentation of honorary awards to three outstanding friends of the school; Harold W. Leitch, Andover, Samuel A. Pinanski, Brookline, and Miss Helen G. Flack, Lowell.

Mr. Leitch was presented the honorary award of the alumni association for his untiring work for the institute as chairman of the board of trustees for the past five years and as the leader in the formation of the New England Textile Foundation which provides scholarships and other aids to the New England textile schools. He is a graduate of L. T. I. and is now general superintendent in charge of research for Pacific Mills.

Mr. Pinanski, also a recipient of the honorary award, was chosen for his excellent work in forming the Lowell

Textile Institute Building Association which secured the necessary legislation to erect two new dormitories at the institute, and for his spearheading the entire expansion program at L. T. I. Besides being president of the building association he is vice-chairman of the board of trustees of the institute.

Miss Flack, who serves as executive secretary to President Kenneth R. Fox of the institute, was awarded an honorary alumni membership in recognition of her years of voluntary unpaid service to the alumni association in keeping its records and files. She is a graduate of Simmons College and past president of the Merrimack Valley Simmons Club.

The awards were made by J. Milton Washburn, president of the association and included a traveler's clock besides the engraved scroll representing the award.

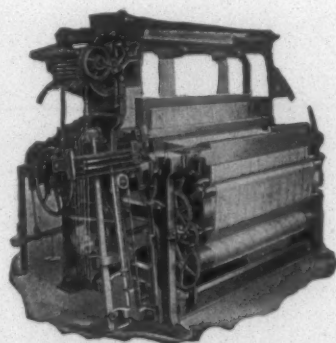
Another feature of the program was the laying of the cornerstone of the second dormitory being built under the L. T. I. expansion plan. The ceremony was in charge of the newly elected student government and featured addresses by President Fox, Mr. Pinanski and Irwin C. Smoler, president of the student government who formally dedicated the building.

Five new members were elected to the board of directors of the association for three years. The included Louis Zisman, New York, Mr. Pinanski, Brookline, John T. Johnson, Pelham, N. H., William F. Brosnan, Newton, and Kenneth B. Park, Wellesley Hills, Mass.

Cotton Council Meeting Date Changed

The National Cotton Council will hold its 11th annual meeting at Los Angeles, Cal., next March 7-9, Harold A. Young, North Little Rock, Ark., council president, has announced. The council originally had announced that its Los Angeles convention would be held Nov. 29-Dec. 1, but at their recent Spring meeting the board of directors of the organization voted to set the date for next March.

"The board determined that the early Spring dates would be more satisfactory to the majority of the council's membership," Mr. Young said. The convention is expected to attract more than 1,000 cotton industry members, represen-



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tatives of allied industries, the U. S. Department of Agriculture, land grant colleges, and other groups.

Many Exhibitors To Show At Greenville

All available space has been taken for the 15th Southern Textile Exposition to be held Oct. 4-9 at Textile Hall in Greenville, S. C., with approximately 200 exhibitors scheduled to display their products. Officials state that the exposition this Fall promises to be one of the most successful in the history of the enterprise, which was established 33 years ago.

No textile show has been held in Greenville since 1941. Makers of machinery and equipment did not have time to prepare displays because of the unprecedented demand for their products and the shortage of materials. These handicaps, while not so serious, still exist, but on the other hand textile plants are in the market for millions of dollars worth of renewals and replacements. Under the stress of war conditions and since peace was declared, many plants have operated more than one shift and the tax upon machinery and equipment has been heavy. There has been little time to make necessary repairs and replacements.

Machinery and equipment makers during the war and since have produced new inventions and improvements. The textile show for the first time in Greenville since 1941, will afford an opportunity to exhibit and demonstrate them. Textile manufacturers who still find it difficult to obtain standard equipment will see examples of new ideas devel-

oped into useful and time-saving devices. These enable mills to make savings in the handling of raw and finished materials. The Southern Textile Exposition will fill the need which all manufacturers of textiles of cotton, silk, rayon and wool are feeling at this moment.

Britain Picked As World Textile Secretariat

The world's secretariat for textiles standards under the International Standards Organization will be located in Britain, British and American delegates at the International Conference on Standardization of Textiles, concluded at Buxton, England, June 12, agreed. The British Standard Institute at London will carry out the duties of the world secretariat.

During discussions on this subject, American delegates expressed appreciation for the work already accomplished by the B. S. I., but offered to undertake the task if Britain so desired. It was agreed that Britain would take on the job on the understanding America was keenly interested and would offer suggestions and constructive criticisms.

The universal yarn numbering system known as Grex was supported by United States delegates to the conference while other nations reportedly gave their backing to "gK" as a universal system. Both are direct numbering systems. It was also decided that it was desirable to agree on a basis for tensile testing to use as a means of comparing results in various laboratories and in various countries.

Considering the controversial subject of what constitutes

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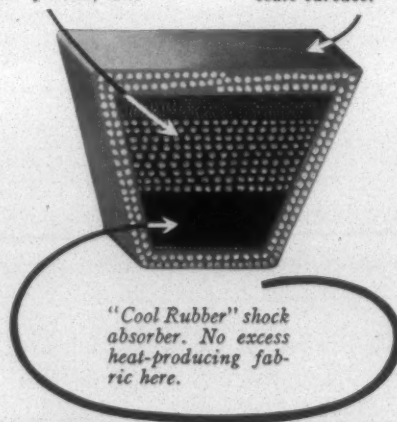
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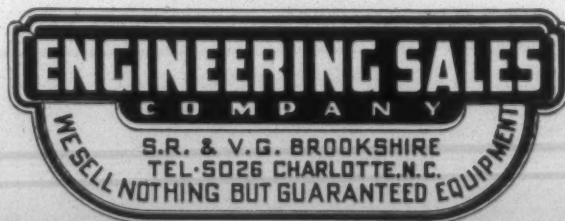
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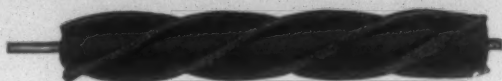


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the most ideal conditions under which to test textiles, the 15 nations represented agreed unanimously to recommend 20° C. and 65 per cent relative humidity as the standard conditions for testing textile materials.

The opinion that a generic term for man-made fibers is still at least two years away was voiced by Vice-Admiral G. F. Hussey, Jr., secretary of the American Standards Association, just returned from the meeting at Buxton, England, where the American suggestions for a single term to cover all man-made fibers were accepted by the conference. Although it was agreed not to split the world's secretariat for all textile standards at the I. S. O. parley, the United States will hold the secretariats for the subcommittee on shrinkage and for the subcommittee on yarn testing, Admiral Hussey reports. The secretariat for the subcommittee on color fastness with particular relation to light, washing and perspiration will be held jointly by the United States and the United Kingdom.

Can You Identify Mr. "X"?



During the floor show at the Southern Textile Association convention our photographer snapped this interesting flash shot of a Texas dance number in which several mill men and salesmen obligingly consented to act as the young ladies' partners. As will be noted, the face of the gentleman in the center is obscured by an armful of blond loveliness. His identity has not been definitely established although evidence to date points to a well known Southern sales representative. Can you help solve the mystery?

Hold Third Annual National Textile Seminar

"The Textile Industry Looks Ahead" provided the theme for the third annual National Textile Seminar conducted May 10-14 at Shawnee-on-Delaware, Pa., during which leaders in various fields discussed new developments in the industry, results of recent research and foreign and domestic conditions. A number of speakers heard during the five-day event expressed the opinion that vast fields for expansion in the textile industry are possible through fuller use of untapped reservoirs in merchandising and research.

New developments in the field of research to reduce the cost of consumer products and widen consumption both here and abroad featured the session on "How Will Industry Apply Research to Production?" Development of consumer products and the industry as a whole through the greater application of scientific discoveries was stressed particularly by Dr. Rogers McCullough of Monsanto Chemical Co. and Julius B. Goldberg, research director, J. P. Stevens & Co., Inc. Speaking on "Textile Research and Its Application to Industry," Mr. Goldberg emphasized the versatility that has been imparted to fibers and fabrics through various proc-

esses and treatments. He outlined the progress made in the past few years in developing products to fit specific end uses, stating that the industry is constantly having to face the ever-present problem of making things better, cheaper, or newer. Research, he declared, is the instrument through which these achievements will be accomplished.

John W. Murray, secretary-treasurer of the Textile Export Association of the United States, told the gathering that an improvement in world living standards in the course of the next decade would be reflected in a substantial increase in textiles. Mr. Murray stated that prospects for American textile exports are mixed. While the latent demand for textiles has been great, he pointed out, never in recent years has the means to support this demand been so limited. Considering the European Recovery Plan, Mr. Murray said that while direct results of the plan will not be felt in textiles aside from raw cotton and yarn, the indirect results should be considerable; adding that it seems quite sure that the United States will hold its leading position in world markets for some time to come.

The opinion that this country must permit the import of goods and services to enable foreign governments to repay their loans was expressed by Beardsley Ruml, chairman of the board of R. H. Macy & Co., in considering means of reducing the tax basis in this country. Included in a three-point program for helping to alleviate the heavy tax burden that the country is facing, Mr. Ruml said "we must expand our imports of raw materials and manufactured goods, we must reduce barriers and impediments to trade, we must

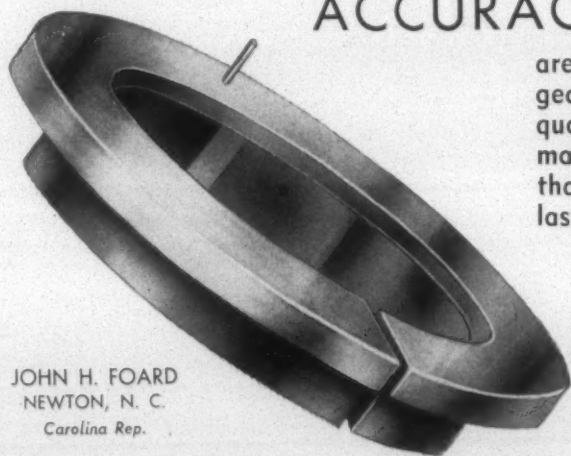
facilitate American tourist travel to other parts of the world." Declaring that we are not likely to have peace in the foreseeable future, he said he expected a heavy defense program "indefinitely."

The trade agreements program, properly handled, could be an act of constructive leadership in which the United States could inform other nations as to the manner and extent to which this country would co-operate, according to Dr. Elvin H. Killheffer, vice-president of E. I. du Pont de Nemours & Co., who added that Congress should reject the Havana draft and offer one based on American principles of free enterprise. "There is no noticeable appreciation of the fundamental weaknesses of government versus private enterprise," he said, "but rather a belief that government bureaucracy can do everything better." Dr. Killheffer served in an advisory capacity to the United States delegation at the Havana conferences.

Herbert H. Schell, president of Sidney Blumenthal & Co., Inc., pointed to our international problems and free enterprise system as the most important matters facing business management today. Leadership has been thrust upon the United States, he said, and the future depends upon intelligently exercising this leadership. Answering the charge that we are too often charged with interfering with the economies of other countries, Mr. Schell observed that since we are supplying the resources, we are justified in stipulating and insisting upon performance.

Considering trade agreements and tariffs, H. E. Michl, economist of the Cotton-Textile Institute, told the seminar

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gathering that concessions obtained from foreign countries on American textiles have been minor and have been limited to relatively unimportant markets. Mr. Michl urged support by the textile industry of the recent proposal that Congress provide for the appointment of a Foreign Trade Authority to make periodic duty readjustments and to safeguard the interests of the economy as a whole.

Anson C. Lowitz, vice-president of J. Walter Thompson Co., pointed out the value of programs emphasizing nationally branded lines in the textile field, declaring that experiences covering the past few years have proved this fact.

Bertrand W. Hayward, director of the Philadelphia Textile Institute, asked for a continuing and more generous assistance from the industry in support of textile schools. Textile schools, he said, represent a reservoir of trained personnel where the industry can obtain the type of man who will help it expand. Considering this same point, Dr. James Cresse, president of Drexel Institute of Technology, stated "an alliance and a good working arrangement between industry and the schools" was essential.

Management and labor will do well to regulate their tactics and arrive at their decisions on the basis of "what's right" rather than "who's right," according to Dr. Glenn Gardiner, vice-president of Forstmann Woolen Co. Calling for mutual confidence and understanding, Dr. Gardiner declared, "if either management or labor exploits or cheats the other, the basic interests of both are harmed." By the very nature of our industrial system, he continued, the area of common interests of management and labor is very broad, as compared with the inherent area of conflict.

Two textile machinery manufacturers predicted sustained textile activity for an indefinite period and lower mechanical operating costs. Discussing loom development, Frederick M. Fitzgerald, research director of Draper Corp., asserted that for the immediate future a further refinement and simplification of the loom as we know it, offers the most promise. Robert McConnell, vice-president of Whitin Machine Works, predicted sustained activity on the fact that the amount of cloth available per capita today is only about the same as in 1922, despite a material increase in national income. "Orders for textile machinery which were placed as long ago as 1943," he stated, "are only now beginning to enter the plant for building."

Textron, Inc., aims to build up its annual volume on nylon tricot garments to a rate of ten million dollars by the end of this year, it was revealed by John A. Spooner, vice-president in charge of public relations. Mr. Spooner stated that currently the volume is running at a rate of five million dollars annually. Integration within the entire Textron organization is progressing steadily with the expectation that by the end of the year 55 to 60 per cent of all plants will be producing labeled products for Textron, Mr. Spooner indicated.

Booklet Outlines Textile Job Opportunities

A new 32-page booklet, entitled "Your Career," published by the Textile Information Service and aimed to interest young men and women in seeking a career in the textile industry, is now being distributed to individuals and educational institutions throughout the textile manufacturing states. Directed particularly to members of 1948 high school graduating classes, the booklet is a frank discussion of opportunities offered in the modern cotton manufacturing

industry for young people with and without textile college training. Included are a considerable number of case histories of men and women who have been successful in the field and a list of "do's and don'ts" for beginners. Salary levels and promotion probabilities are discussed and housing and recreational facilities usual to mill towns and cities are reviewed.

Treating briefly on the sociological and technological progress made by the industry in recent years, the booklet makes no "pot-of-gold" promises but is optimistic about the future of the business. It concludes with the observation that modernization of plants, discovery of new products and profitable return after many lean years have developed opportunities far greater than ever before in the history of the industry. Although many textile mills will have the booklet available to fill requests, young people who find it more convenient can secure copies by writing direct to the Textile Information Service at 551 Fifth Avenue, New York.

Recent News Of British Textiles

Cotton Yarn Production Record—Production of cotton yarn in the United Kingdom broke all post-war records in the first week in May with a volume of 18,140,000 pounds. The previous best, achieved in the preceding week, was 18,070,000. Target for the end of 1948 is a rate of 20,000,000 pounds weekly. This compares with the average weekly production last year of 14,120,000 pounds.

Textile Machinery Exports—Exports of textile plants from Britain are running at the best since 1930. In the early part of this year the annual rate of British textile machinery exports approached the 120,000-ton mark compared with 81,000 tons in 1947, when more than half of the exports consisted of spinning and twisting machinery. These figures should be compared with 53,000 tons in 1946 and 71,000 tons in the last complete pre-war year. India has for many years continued to take a bigger share of the exports than any other individual market, with Egypt and Brazil occupying second and third places. Among other important outlets were France, Argentina, China, the United States, Belgium, Australia, Canada, the Union of South Africa, Mexico, and the Netherlands. Makers of automatic looms have an exceptionally large volume of orders. Exports of second-hand machinery in 1947 amounted to 14,500 tons and the volume of shipments of used plants has not diminished this year.

No Halt in Modernization of Britain's Textile Industry—Britain's record breaking exports of textile machinery will not be at the expense of home textile manufacturers. This was stressed by Harold Wilson, president of the Board of Trade, in a speech in Manchester recently. He said that while from the long-term viewpoint it was essential that the textile machinery industry should maintain its position in the export field, Britain's government had agreed that any short fall in total production must be borne by the export side. Present indications are, however, that the British textile machinery makers will be able to meet both home and overseas needs. Production of automatic looms, for example, is already double pre-war, and plans are now in hand to treble it. Again, this industry has top priority with mining in plant supplies, while the possibility of still further extending capacity is being examined by the government.

New Methods for Increasing Cotton Output—Experiments on ways of increasing output from Britain's cotton

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mills concluded with the issue early in April of a detailed report on the result of these trials. The report recommends methods which, it is considered, would add 40 per cent to production, while at the same time providing workers with higher earnings. These conclusions are based on tests extending over six months; they were published by the Labor Department of the Cotton Board. The plan involved rearrangement of duties and layout of machines, combined with incentive system payments. It was devised by a firm of industrial consultants and accepted by workers, trade unions, and mill management. The test was carried out in one of the largest mills in Lancashire, and was the first of its type to be made. According to the director of the Labor Department, the increased output which resulted from the experiments was accompanied by more even distribution of the load of work. This gave improved balance between the various processes, and provided all workers with an opportunity to produce more. Following the success of these trials, managers and foremen of mills in the main spinning towns of Lancashire were invited by the Labor Department to lectures being given by the industrial consultants who planned the tests.

Wool Research Development Plan—Britain's Wool Industries Research Association at Torridon, Leeds, announces in its annual report a large extension and development scheme to be carried out in stages over the next four or five years at a cost of about £320,000 (\$1,280,000). The work is said to be necessary if wool research is to keep pace with the needs of the industry, and because of the attention being devoted to other fibers. The first stage of the scheme, which includes a physics block and a woolen block, will be completed this year. Next year a weaving block will be completed, followed later by new research laboratories and administrative headquarters, a new library, scouring sheds, a lecture hall and museum. The entire project will be completed in 1953.

Permanent Mothproofing of Wool—A new scientific discovery which guarantees permanent moth-proof woolen cloths was announced in London at the end of May by the International Wool Secretariat. The discovery hinges on years of research into means of making wool indigestible to moth grubs. The usual method of moth-proofing has been to add anti-moth chemicals, to the surface of the fiber and this has always had the drawback that the chemicals eventually washed off. Now, by soaking the wool in a certain solution, the fibers can be rapidly changed from the moth grub's favorite food to something it cannot digest at all.

Moisture Meter for Cotton—A machine which insures a ten to 15 per cent increase in cotton yarn production has been developed by textile research workers of the British Cotton Industry Research Association, Shirley Institute (Didsbury, Manchester). Purpose of this machine, called the Electrical Hygrometer, is to measure moisture condition of yarn. This job has hitherto been the responsibility of mill operatives, who, however skillful, are not infallible—and a moisture condition above specified percentage carries risk of subsequent mildew. The Hygrometer measures the moisture content of the yarn as it comes off the machine and records it on a motor. This enables the operative, by slowing down or speeding up the machine, to insure that the yarn is coming off with the exact proportion—nine per cent—of moisture content. Besides stepping up production, the Electrical Hygrometer insures a considerable saving in fuel because

the yarn is not overdried, and also less wastage of yarn in shortage due to under-drying.

New Lightweight Wool Fabric—A new wool fabric, which may revolutionize the whole field of lightweight and tropical clothing, has been developed by two British firms. This fabric, which weighs from 1½ to seven ounces per square yard, is claimed to be four times as strong as any known wool fabric of similar weight. It is made from blended yarns containing 95 per cent wool with five per cent or less of nylon. The nylon provides a fine core which is almost invisible to the naked eye and imperceptible to the touch in the finished fabric. Woolen yarns of as fine as 50 skeins, and worsted yarns of 100 to 120 counts spun with this nylon core can be woven into cloth which has both handle and appearance of an all-wool cloth. It can be dyed, printed and processed by normal methods. The new cloth is expected to have almost unlimited scope for clothing which must be hard-wearing, such as uniforms, men's tropical shirts, suitings, dress fabrics, and furnishing fabrics. Its makers claim that it can be woven on automatic looms in a wide range of weights, and that it is less liable to shrink than ordinary wool fabrics.

Nylon Developments—British manufacturers are now increasingly using nylon combined with worsted yarns as a permanent but virtually invisible support for the softer fiber. The combination can be achieved either by folding a single worsted yarn with a nylon yarn or by leading the nylon yarn into the worsted yarn during the spinning operation. Work carried out by British Nylon Spinners, Ltd., has shown that by the first mentioned method a yarn with most of the properties of a two-fold worsted can be produced from a much coarser single yarn while by the second method the spinning limits indicated by the wool-top quality number can be greatly exceeded. The nylon reinforcement also gives greater weaving efficiency with the finer yarns. The strong lightweight yarns produced by the introduction of nylon can be used for a very wide range of fabrics and garments for men's and women's wear.

New Methods and Problems in Dyeing of British Textiles—A number of technical problems are at present under examination by Britain's dyeing industry. Because of the large amount of scientific data on bleaching accumulated in Britain, it is possible to accelerate the process of bleaching and dyeing up to the limit consistent with the maintenance of high quality. The new synthetic fibers such as nylon have brought special dyeing problems. Man-made fibers are normally manufactured by forcing viscous liquids through fine holes into a medium where hardening of the filamentous matter occurs. The molecules of the nylon are compact and regular like a full box of matches, while molecules of other synthetic fibers are more loosely connected to each other. Molecules of natural fibers also exhibit differences in their compactness. Silk is more compact than cotton while wool has even more amorphous regions than cotton, allowing much easier penetration so that these regions are the sites on which dyeing occurs. Nylon is 25 per cent more compact than silk. These differences partially explain the greater absorption of perspiration by wool compared with cotton, and the water-resistance of nylon hose.

The coloring of man-made fibers, especially of nylon, presents much difficulty to the dyer and Britain's research workers have been searching for methods and dyestuffs capable of facilitating the coloring of these fibers. Some success has been obtained by using solvents other than water,

which tend to swell the structure of the fiber, thus creating a more open network into which the dye molecules can enter. Similarly, swelling agents that enhance the swelling effect of water have been looked for and used. A fundamentally new approach to the problem has been presented recently by the fact that the molecules of synthetic fibers can be modified during manufacture. British research workers are now introducing groups into the molecule which project like arms and prevent a too close approach of adjacent molecules, thus creating a more open network, and in consequence an increased number of dyeing sites.

Synthetic Plastic Fabric—Tygan, a new synthetic fabric, woven from a plastic yarn, has been developed after many years of research in Manchester, England. The new fabric has been introduced by Fothergill and Harvey, Limited, in association with B. X. Plastics, Limited, who have specialized in the development of synthetic yarns. The new woven fabric is immensely tough, washable, weatherproof, rotproof, mothproof and fast to light. It has a negligible water absorption, is equally strong wet or dry, and can easily be cleaned by sponging. Tygan resists corrosion, even by sea water, and it is also exceptionally resistant to acids, alkalis, alcohol and many other organic solvents.

Idaho Has Textile Industry Course

A pioneer venture in the educational field is being undertaken this Summer by the University of Idaho, Moscow, Idaho, which is offering for the first time a full college credit course in "The Textile Industry." The Summer course will run for six weeks from June 10, and is being given in the university's College of Business Administration by Dr. Simon Williams, dean of Lowell (Mass.) Textile Institute.

Aimed at the layman, the teacher, the scientist, and the engineer, the course purposes to present an accurate, modern picture of the textile industry; to bring about a better understanding of the industry as one of the cornerstones of the culture and economics of the nations of the world; and to assist the industry in presenting a factual story of its activities in one of the country's leading producing sections widely separated from textile manufacturing areas.

In the hope that through the medium of education, industry and society will be brought into closer understanding and appreciation of mutual problems, the Cotton Textile Industry-wide Committee on Public Relations, through its chairman, G. Ellsworth Huggins, was instrumental in bringing the course to Idaho. Early in his career, Mr. Huggins was a member of the faculty and taught at the University of Idaho and it is on his recommendation that the university is offering the course.

"The Northwest is an important producing center of wool and flax," Mr. Huggins said, "and the course at Idaho will acquaint people of the area with what happens to their products. The course will trace the history and progress of the entire industry in all its branches, including cotton, silk, rayon and wool. One purpose is to encourage more young people of the Northwest to follow textile careers."

During the week of July 12 to 16, a textile conference, open to the general public, will be held. At this conference, representatives of the textile manufacturers in the Northwest, retail clothing firms, fabric cleaning establishments, home economics teachers, and housewives, as well as wool growers and flax producers, will be encouraged to attend.

According to Dean Williams, special attention will be

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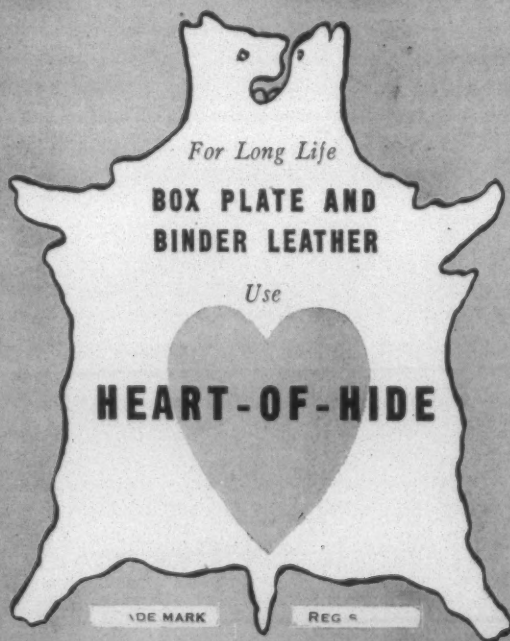
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Chemical Show To Feature Conference

Plans for the fifth National Chemical Exposition to be held Oct. 12-16 at the Coliseum in Chicago, Ill., include the revival of the National Industrial Chemical Conference, which was not scheduled at the last show held in 1946. The Chicago Section of the American Chemical Society, sponsor of the biennial expositions, called off the conference in 1946 in order to co-operate fully with the important Fall meeting of the A. C. S. held during the period of the show.

"The conference will feature noted speakers who will present interesting papers on new developments, discoveries and applications in industrial chemistry," said Dr. L. E. Clifcorn, chairman of the exposition committee. "Sessions will be held in the Coliseum Annex under the same roof with the show. All show visitors will be welcome to attend the conference."

Chemical Trail Blazers, a popular feature at past Chicago expositions, will be repeated this year on a larger scale, it is announced. A special committee is searching for new developments and discoveries to add to the educational value of this highly diverting, instructive and fascinating display. Sketches, panels and specimens will be presented.

Coating On Steel Ties Causing Loss

Use of an asphalt coating on steel ties used in baling cotton has resulted in some spinners losing up to \$40 a bale, a loss which will be shared by the entire cotton industry if not solved through co-operative action, the National Cotton Council has reported. A council spokesman said the coated ties leave deposits of oily tar in the cotton and, unless these stains are removed by a tedious and expensive hand process, damaging blemishes appear in the finished goods. Approximately 50 per cent of the ties now in use are coated with the substance. Cotton manufacturing plants report that fabrics made from such bales have been rejected and returned, and that other lots have been discounted heavily as a result of black stains in finished products.

The council has made the following preliminary recommendations: (1) that manufacturers of cotton bale ties discontinue coating ties until a suitable coating material can be provided; (2) that cotton spinners refuse to sell coated ties for re-use as bale ties; (3) that intensive efforts be undertaken to find a solvent which will effectively and economically remove paint from coated ties now in trade channels, and that oil mills, compresses and gins be urged to have the paint or coating removed before using ties; and (4) that an intensive educational and informational campaign be initiated throughout the industry immediately.

The council reported that the major producer of cotton bale ties has discontinued the coating process and another manufacturer is considering similar steps. However, approximately 60 to 75 per cent of the bale ties required for the 1948-49 cotton crop have been manufactured and now are in the channels of trade. As about half of these ties are coated, the disposition of this volume remains a serious

problem for the industry. The council spokesman expressed the hope that close co-operation in all divisions of the industry would prevent establishment of severe penalties and a possible embargo on any cotton delivered with coated ties.

Magazine Features Reeves Work Clothes

Functional work clothes, scientifically calculated to fit the job, will add to safety, comfort and efficiency in many trades and professions, according to *Look* magazine, which features the specially designed uniforms of Reeves Brothers fabrics in the issue on sale June 22. Wartime research on combat uniforms originally led Reeves to the idea of analyzing the work motions and special needs in various job categories with a view to improving workers' uniforms, *Look* states.

Months of research preceded the actual designing of the Reeves work clothes. Points of greatest strain were noted in the various job requirements, and these points have been reinforced with seam engineering and other features calculated to lessen strain. New uniforms for workers whose jobs involved bending, reaching or lifting allow for ease of motion. The safety factor was carefully considered, and pleats, gadgets and anything that might get caught in machinery were avoided.

Designed by Helen Cookman, who originated the popular nurses aide uniforms during the war, and more recently revamped the uniforms for the Pennsylvania Railroad, these new work clothes have received extensive tests for sturdiness. Laundering tests were made to determine ease of maintenance as well as durability of color and fabric. Reeves cotton textiles are used throughout, and the garments are made up according to the Reeves specifications by various clothing concerns throughout the country.

Report On German Dyestuffs Available

German dyestuffs, dyestuff intermediates and related manufacturing processes, plant designs and research data are described in an unusually comprehensive three-volume report now on sale by the Office of Technical Services, Department of Commerce. Nine American experts in the field of organic dyestuffs and intermediates collected the data in an O. T. S. sponsored investigation of I. G. Farbenindustrie plants and laboratories at Hoechst, Ludwigshafen, Leverkusen, Offenbach, Greisheim, Uerdingen, and Mainkur, and also the German firms G. Siegle & Co. at Stuttgart-Fuerbach, Siegwark Farbenfabrik at Siegburg, and L. Vossen & Co. at Wesserling. The nine investigators were: D. B. Andrews and P. Kronowitt, General Aniline and Film Corp., and F. W. Peck, S. S. Rossander, A. Siegel, O. Stallmann, H. I. Stryker, W. A. Von Schlieben, and W. V. Wirth of E. I. du Pont de Nemours & Co.

The time available for the investigation (April through June, 1947) did not allow for a thorough investigation of all the subjects mentioned in the report, the authors say. Each investigator, however, attempted to select data of most value to American industry, and to obtain sufficient information so that the German developments could either be duplicated by American chemists and engineers or further investigated with a minimum of effort. The investigators also sought to avoid duplicating information obtained in earlier reports of American and British investigators which are available through O. T. S.

The report is divided into three volumes. Volume I (532

pages) covers intermediate processes and analytical procedures including: benzene intermediates, naphthalene intermediates, miscellaneous and aliphatic intermediates, continuous processes, and analytical procedures. Volume II (439 pages) covers dyestuffs processes and engineering data including: anthraquinone vat colors and related colors and intermediates, azo and azoic colors, indigoid, thioindigoid and sulfur colors, basic dyestuffs, and engineering, safety, health, miscellaneous equipment, continuous processes, and construction data. Volume III (594 pages) is devoted to dyestuff research, including: anthraquinone, azo and azoic, thioindigoid, sulfur and basic colors, phthalocyanines, dyestuff identification research, laboratory research equipment, application of X-ray technique in the chemical industry, and organic lakes and pigments.

A bibliography and a list of personnel interviewed are appended. The report is illustrated diagrammatically throughout. Each volume of the mimeographed report (PB-85172, *German Dyestuffs and Dyestuff Intermediates*) sells for \$5. The set of three volumes is \$15. Orders should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order payable to the Treasurer of the United States.

Shippers To Enforce Fair Practices Rules

Effective Aug. 1 the American Cotton Shippers Association will put into use drastic fair practices rules relating to sale and delivery of irrigated, rain-grown, re-ginned and foreign staples, according to Allison H. Pell, president. The purpose of these rules, which provide severe penalties for violation, is to protect all elements of the domestic and foreign trade in raw cotton against improper substitutions of one type for another when shipments are made against contracts. Responsibility for enforcement of the rules will be placed upon a fair practices committee, which was authorized at the association's recent annual meeting in Dallas, Texas.

Higher Rates Sought By Duke Power Co.

The Duke Power Co. June 14 filed applications with the State Utilities Commission, Raleigh, N. C., requesting higher power rates for its larger power consumers. The power company asked for permission to add a fuel clause to its power rate schedules under which the rate would be increased by .0065 cents per kilowatt hour for all power in excess of 15,000 kilowatt hours per month for each ten cents the cost of coal exceeds \$7 per ton. The Carolina Power & Light Co. applied for and received from the utilities commission permission to institute a similar fuel clause earlier in the month.

The increased rate, should it be granted, would affect principally the vast textile industry of the Piedmont Carolinas.

The power company cited increases in its fuel costs and other operating expenses as justification for the increase. Duke estimated in its application that the fuel clause would gross \$933,000 during the last five months of 1948 and that during 1949 it would gross \$3,526,000. The company also asked for increases in its gas rates.



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Ray Bell Makes Annual Statistical Survey

Warning that cotton mills are highly unlikely in view of mounting labor and raw material costs to undertake the risks of inventory accumulation, W. Ray Bell, president of the Association of Cotton Textile Merchants of New York, suggested June 3 that purchasers of textiles in recent months have been swinging to extremes of caution and "may later discover that they have missed broad opportunities to do business in their failure to anticipate reasonably the requirements of a domestic market of 145 million customers in a land where national income continues at a rate above \$200 billion annually."

Hand-to-mouth buying policies, Mr. Bell noted, "back-fired with disastrous results for many buyers last Summer" and the pattern may today be repeating itself. Whether it will do so depends first on the rate of digestion of goods in distributing channels in this second quarter of 1948, and second on sound operating policies among the producing mills. While the current rate of absorption may be a point of disagreement today between buyer and seller, a greater certainty prevails as to mill views of inventory accumulation. "An unduly protracted period of excessive caution on the part of purchasers can only result in extensive curtailments, particularly in the Summer months," Mr. Bell stated.

Commenting in the association's annual "Ten Years of Cotton Textiles" survey, Mr. Bell expressed the view that conditions in the industry were unlikely to reach a stage necessitating curtailments of production, however.

Policies of full production have been followed on a broad scale, and in 1947 the industry, according to the records of the association's "Ten-Year Chart," turned out 11,077 million square yards, "the largest year ever of peacetime production." Even this output of goods, exceeded only in the war years 1941, 1942 and 1943, provided a per capita supply of only 66.82 square yards, a shade under 1946, and less than the 67 square yard figure of 1939.

Record production rates, Mr. Bell noted, have continued over into 1948, with the industry geared to near capacity operations, and output for the first half is likely to equal or slightly exceed the first half of 1947. Not only have there been vast gains in the over-all yardage, but even more notable rises in production of essential items have occurred. Heavy percentage increases of production in print cloths, sheetings, fine goods, colored goods, bed sheeting, and other divisions were noted, while in areas such as ducks, drapery and upholstery fabrics, tickings, and other groups of lessened demand, output was reduced. Individual print cloth and carded broadcloth constructions showed production gains of 70 to 163 per cent in 1947 from 1946.

After noting record exports of 1,470 million square yards in 1947 and an export rate for early this year about ten per cent under the comparable 1947 period, the report pointed to the industry's intensive production effort as having been

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TEN YEARS OF COTTON TEXTILES

Data assembled by The Association of Cotton Textile Merchants of New York from Bureau of the Census reports and information obtained through the courtesy of machinery manufacturers. Cloth production for the non-census or even years prior to 1941 has been estimated to correspond to spindle hour activity during the preceding census years. Cloth production for 1941 is WFB estimate of June 29, 1942 which is the basis used for subsequent calculations, with appropriate modifications.

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
EQUIPMENT											
COTTON SYSTEM SPINDLES											
Spindles in place at beginning of year	26,704,476	25,994,676	24,940,204	24,504,490	24,157,306	23,757,844	23,342,922	23,105,942	23,806,392*	23,927,706*	23,730,000*
Increase or decrease from preceding year	869,294	709,800	1,034,472	435,714	347,184	399,462	414,922	236,980	700,450	121,314	197,706
New installation, additions or replacements	178,280	349,416	414,974	449,848	210,456	7,752	82,736	323,688	323,056	416,555	
OPERATION											
CONTINUING COTTON ONLY											
Spindles active at any time during year ending July 31st	24,774,004	23,731,050	23,585,938	23,389,454	23,607,508	23,429,252	23,018,828	22,674,852	22,586,512†	22,779,743†	
Spindles idle or active on other fibers during same period	1,930,472	2,263,626	1,354,266	1,115,036	549,798	328,592	324,094	431,090	1,219,880	1,147,963	
Average number of active spindles based on twelve monthly reports	22,039,179	22,317,552	22,410,966	22,955,205	23,051,400	22,744,106	22,332,080	22,018,529	21,933,578†	22,113,833†	
Intermittent spindles (using the difference between average active spindles and those active at same time during year)	2,734,825	1,413,498	1,174,972	434,249	556,108	685,146	686,748	656,323	652,934	665,910	
Percentage relation of average active spindles to spindles in place	82.53%	85.85%	89.86%	93.68%	95.42%	95.73%	95.67%	95.29%	92.13%	92.42%	
Spindle hours run	76,252,297,000	92,570,738,000	98,279,419,000	121,968,582,000	133,536,052,000	125,413,065,000	114,984,489,000	107,325,501,000	109,368,009,000	116,349,000,000	
Hours run per average active spindle	3,460	4,148	4,385	5,313	5,793	5,514	5,149	4,874	4,986	5,261	
MARKET											
Production in square yards	7,548,977,000	9,044,979,000	9,601,899,000	11,327,903,000	12,204,611,000	11,569,224,000	10,572,421,000	9,779,238,000	10,171,225,000	11,077,172,000	
Exports in square yards	319,634,000	367,466,000	357,925,000	586,739,000	447,850,000	538,462,000	638,096,000	672,789,000	774,945,000	1,470,285,000	
Imports in square yards	58,282,000	111,817,000	84,344,000	61,148,000	17,643,000	19,764,000	11,188,000	79,879,000	44,514,000	15,867,000	
Available for domestic consumption	7,287,625,000	8,789,330,000	9,328,318,000	10,802,312,000	11,774,404,000	11,050,526,000	9,945,513,000	9,186,328,000	9,440,794,000	9,622,754,000	
Population at July 1st	130,215,000	131,300,000	131,970,000	133,203,000	134,665,000	136,497,000	138,083,000	139,585,000	141,229,000	144,002,000	
Available for per capita consumption in square yards	55.97	67.00	70.68	81.10	87.43	80.96	72.02	65.81	66.85	66.82	

* Includes cotton system spindles on other fibers.
† Estimated.

"successful in stemming the tides of inflation" in the home market. High premiums of ten to 12 cents a yard for spots of more volatile fabrics have been removed, and "with this froth off the boom, the days of easy profits accruing solely from the ownership of goods have probably vanished." In other market divisions inflationary pressures have been avoided, speculation barred, and marketing has been orderly. Today, in place of the emphasis on restoration of pipelines of supply and restocking of depleted inventories, a period is opening where market demand will be regulated by the replacement needs of trades and businesses supplying the consuming public.

The "Ten-Year Chart" accompanying the survey shows production of 11,077,172,000 square yards in 1947 against 10,171,225,000 in 1946; exports of 1,470,285,000 against 774,945,000; imports 15,867,000 against 44,514,000; available for domestic consumption 9,622,754,000 against 9,440,794,000; and available per capita 66.82 against 66.85.

Futures issues of the annual survey, stated Mr. Bell, most likely will be amended to include data relative to rayon cloth production developments within the cotton textile in-

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dustry. "They represent, not a sudden departure from customary practice, but rather a steady growth in fiber diversion which has been greatly encouraged by the continuing high cost of raw cotton and the relative stability of staple rayon values. Presumably, the yardage produced from these cotton mill operations on fibers other than cotton is included in the census reports on rayon broad woven goods production which for the calendar year of 1947 was estimated at slightly under two billion linear yards for all rayon, nylon, silk, and related fabrics. The bulk of this volume was in goods made of rayon yarn whose production increased 11 per cent, or 186 million linear yards during the year. The sub-divisions of fabrics made of 100 per cent spun rayon yarn made a particularly large gain from 191 million linear yards in 1946 to 294 million in 1947. How much of this substantial production was made in mills using the cotton system is not separately estimated but, it is pertinent that in spite of the substantial increase in cotton mill activity and huge yardage production of cotton goods, the consumption of raw cotton declined from 9,827,000 bales in 1946 to 9,555,000 bales

in 1947. Generally this decrease of $2\frac{3}{4}$ per cent, or 272,000 bales, is explained by the trend toward lighter weight fabrics, but it is also axiomatic that spindles operating on other fibers than cotton are not consuming cotton.

"Regardless of fiber selection, weaving mills in each branch of the textile industry were busily engaged during 1947 in stretching productive operations to the practical limit in a mighty effort to catch up with the heavy requirements of commercial demand. This was especially the experience in the last half of the year, following a premature and ill-advised movement to restrict new purchases and starve inventories in retail channels. The net results of this abortive effort was to concentrate demand in later months on spot goods and nearby deliveries, with a consequent premium being paid on certain multi-use fabrics of greatest demand. Not until the end of the year did a change appear in this situation and although the industry was pursuing with vigor appropriate corrective methods for the condition, it had to endure criticism from uninformed sources."

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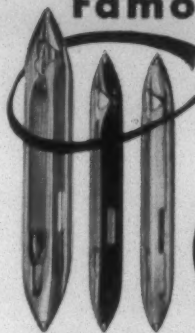
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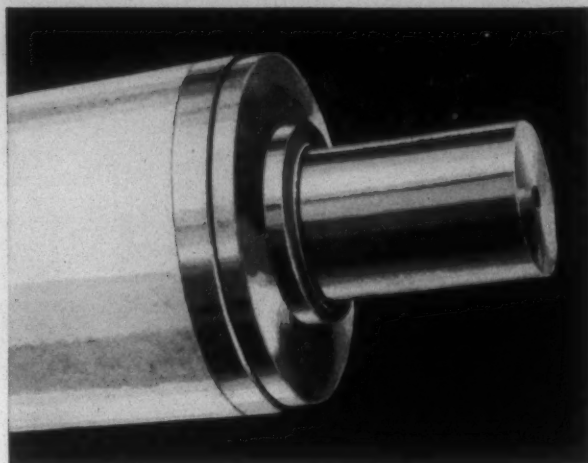
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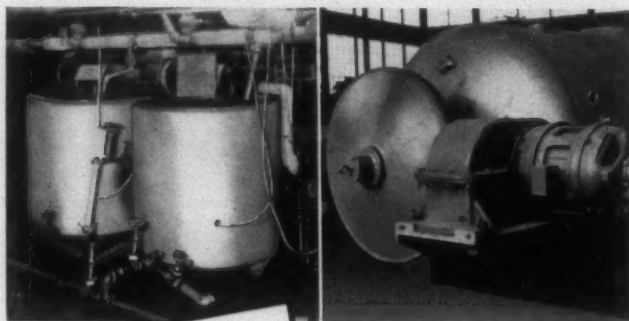


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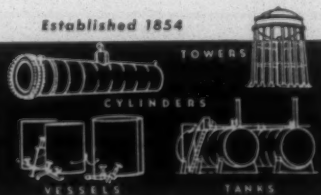
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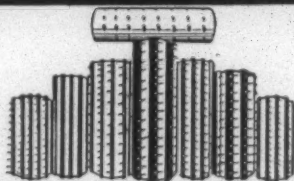
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WANTED—Position as Superintendent of Sewing Room, or a General Overseer of same in textile plant. References. Write "Sewing," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as Overseer of Carding and Spinning. 35 years' experience and can furnish excellent references as to character and ability. Now employed, but desire change. Write "L. L.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED—Textile graduate of cotton carding and spinning desires position in training for assistant superintendent. Can give good references. Write "Graduate," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

EXPERIENCED OVERSEER, now employed, would like to make a change for good reason; can explain. Have 12 years' experience as overseer on all types of Draper work. 40 years old; married; no bad habits. Can give best of references; will go anywhere in or out of the U. S. A. Write "Experienced," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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Competent Overseer of Weaving for sheeting mill of about five hundred looms, located in the best section of Georgia. Please give age and experience, with references and salary desired, in letter of application.

Address "XYZ," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED

Position as Overseer of Weaving by practical weave room man. Experienced in cotton and rayon weaving. Sober, reliable, and can furnish A-1 references.

Write "W. R. M.," care Textile Bulletin, P. O. Box 1225, Charlotte, N. C.

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"General Manager," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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Write "Overseer," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED

Position as Overseer Weaving. 22 years' experience in weave room, 6 years as overseer. Helped set up maintenance in one of the largest mills in the South. Graduate of LaSalle Industrial Management and Modern Production Methods. Age 45, sober, and family man. Write "E. W. R.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED

Position as Superintendent. Prefer combed weave mill. Past twelve years as superintendent of both yarn and weave mills. Now running weave mill as superintendent. Forty-five years of age.

Write "T. D. A.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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Write "Dyer," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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"Manufacturing," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED

Spinning room, twisting and finishing, or both. Twelve years' experience in the above departments. Three years in carding. Thirty-nine years old. High School and I. C. S. graduate. Married, have one daughter. The best of references.

Write "Y. C. M.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED

Position as Cloth Room Overseer. Have 27 years' cloth room experience. 16 $\frac{1}{2}$ as overseer with one Charlotte company. Married, excellent manager of help, including organized labor. Can furnish any necessary references.

Write "O. C. P.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED

Assistant Overseer of Carding, large Alabama mill.

Reply to "Alabama," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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WANTED—Job as Night Superintendent or Overseer Carding, Spinning and Twisting. Experienced on white and colored warp, fine and coarse counts. Good manager of help. Married; age 44; strictly sober. Address "Night Overseer," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

AVAILABLE after July 15th, practical mill Superintendent; 16 years' experience as overseer and superintendent on wide and narrow cloths; 44 years of age; now employed as superintendent; best of references. Write "Practical," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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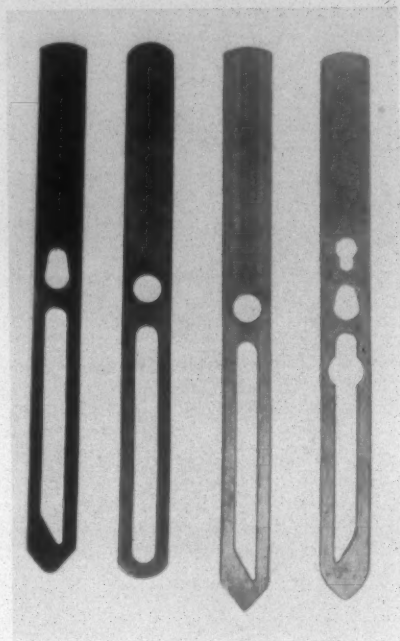
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—TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED—

MILL NEWS

LAVONIA, GA.—Bids were received June 28 for construction of a weaving mill here for Albert J. Bartson Co. of Midland Park, N. J. Architect-engineer for the project is Eubank & Caldwell, Inc., Boxley Building, Roanoke, Va.

DANVILLE, VA.—George S. Harris, president and treasurer of Dan River Mills, announced June 16 that the firm will return to a normal five-day operation. He said weekly operations generally will cease at midnight Friday, and will be resumed as usual Sunday at midnight. "While returning to the five-day week, the mills will continue three-shift operation so that the reduction will not occasion any loss of jobs," Mr. Harris said.

GASTONIA, N. C. — Safety committee members from all plants of the Gastonia Combed Yarn Corp. were dinner guests recently of the Armstrong safety group. The event was in celebration of a perfect three months safety record at the Armstrong plant, representing 150,000 man-hours worked without a lost time accident. C. C. Armstrong, treasurer of the firm, spoke briefly about the importance of the safety program, pointing out that the company was interested in doing everything possible to promote the safety of the employees and reduce accidents to a minimum.

GASTONIA, N. C.—The Yates D. Smith textile machinery firm of Gastonia currently has underway a series of overhaul and installation jobs in the Carolinas and Tennessee, as follows: Overhauling roving frames, Springs Cotton Mills, Kershaw, S. C.; overhauling spinning, Borden Mills, Kingsport, Tenn.; installing additional spinning and roving frames, Pee Dee Mills, Inc., Rockingham, N. C.; overhauling spinning, Florence Mills, Forest City, N. C.; and installing additional roving frames, Burlington Mills Corp., Modena plant, Gastonia, N. C.

NEW YORK, N. Y.—Sales and operating income of J. P. Stevens & Co., Inc., for the fiscal quarter ended May 1, 1948, totaled \$75,129,099, according to a report filed with the Securities and Exchange Commission.

SPARTANBURG, S. C.—Formal opening of the new offices, clinic and laboratory at Spartan Mills is scheduled for about mid-July. An "open house" to which employees and their friends have been invited will be held in connection with the opening of the new facilities.

GOLDVILLE, S. C.—Veteran employees of Joanna Cotton Mills Co., at presentation exercises June 19, were presented pins, rings and watches in appreciation of their continuous and loyal service to the plant.

GREENVILLE, S. C.—Southern Pile Fabric Co. and Brooks Bros. Co. of Greenville have

been purchased for an undisclosed sum by Brookline Fabrics, Inc., a new corporation. Southern Pile Fabric Co. produces jacquard plushes and velours and Brooks produces damasks and tapestries. Officers of Brookline Fabrics, Inc., are: George Buckley of Chicago, Ill., president; Myer Roseman of Philadelphia, Pa., vice-president; Ray Pine of Chicago, secretary; and William C. Torkington of Philadelphia, treasurer. The new corporation will maintain sales offices in New York City, Philadelphia, Chicago and Los Angeles.

LIBERTY, S. C.—A new addition in the form of a wing that will be the width of the entire mill is currently under construction at the Woodside Cotton Mills Co. unit here, formerly Easley Mill No. 3. The wing will house the machinery now on the second floor of the old building and will make room for new equipment in the spinning room. New machinery will be installed in the spinning room and the card room will also be enlarged.

GRAY, GA.—The Draper Corp. of Hopedale, Mass., will operate a shuttle block factory here as soon as machinery can be installed and a supply of dogwood obtained. The plant is expected to begin operations the latter part of July.

NEW YORK CITY—Directors of United Merchants and Manufacturers, Inc., at a meeting May 26, declared a regular quarterly dividend of 25 cents per share and an extra dividend of 30 cents per share on the common stock, both payable June 14, 1948, to stockholders of record at the close of business June 7, 1948. With this payment dividends for the fiscal year ending June 30, 1948, will total \$1.60. In addition a ten per cent stock dividend was declared on the common stock payable July 30, 1948 (or as soon thereafter as listing on the New York Stock Exchange and registration with the Securities and Exchange Commission shall have been completed), to stockholders of record at the close of business July 8, 1948.

PENDELTON, S. C.—Operations are expected to begin in July in some sections of the new Deering, Milliken & Co. plant which is now about 60 per cent completed. While completion of the plant is not scheduled until October, some machinery will be installed in units as they are finished. The main building of the new plant will be 533 feet long and 320 feet wide. The additional office section will measure 224 by 51 feet. When put into full operation the mill will employ about 400 persons.

DUBLIN, VA.—Sale of the warehouse area of the government-owned New River ordnance plant here to the Burlington Mills Corp., Greensboro, N. C., for \$80,000 was announced June 22 by the War Assets Administration. The property includes about 62 acres of industrial land, leasehold im-

provements, ten warehouses and a railroad siding.

GREENVILLE, N. C.—Greenville Spinners, Inc., sold all its spinning, warping and winding machinery some time ago and have been making and selling roving to other mills. Officials have now decided to close down and will sell the remaining machinery.

CHARLOTTE, N. C.—The Uster Corp. has been chartered by the secretary of state and will handle the engineering, distribution, installation and servicing of weaving preparatory equipment and testing instruments used by textile mills. Authorized capital stock is \$105,000 with \$300 stock subscribed by C. R. Harris, George MacDow and Haywood Robbins, all of Charlotte.

GREENVILLE, S. C. — Work on a new warehouse for the Woodside Cotton Mills Co. is scheduled to begin July 1, north of the present mill. Plans for the building, to be completed by October 1, include loading platforms and ramps.

GAFFNEY, S. C. — Limestone Mfg. Co. Plants 1 and 2 will suspend operations from July 3 through July 11, company officials announce. Both plants will close at 10 p. m. July 3 and will resume operations at 6 a. m. July 12. Limestone Mfg. Co., employing about 700 persons, is owned by M. Lowenstein & Sons, Inc., New York City.

WARRENTON, N. C.—Peck Mfg. Co. is adding a 32-foot extension the full length of the mill. Additional space will be used to take care of the yarn conditioning unit.

WINCHESTER, VA. — A public auction June 18 of machinery and equipment of Winchester Woolen Co., Inc., which recently voted to voluntarily liquidate, attracted over 50 buyers from nine states who paid about \$150,000 for the firm's equipment. Spinning frames brought \$6,700 apiece, automatic looms \$5,000 apiece, and other equipment in proportion.

PERSONAL NEWS

Gerald W. Porter, manager of the Forsyth Division of the Duplan Corp. in Winston-Salem, N. C., has been elected president of the Co-operative Club of Winston-Salem.

Pierre Sillan, manager of the Fabric Development Division of American Viscose Corp., has announced his resignation effective July 1. Mr. Sillan plans to return to the textile industry in fabric development work. . . . Walter E. Scholer, who joined American Viscose in September, 1940, as assistant manager of the Fabric Development Department, will succeed Mr. Sillan.

Marcia Mae Schrupp resigned June 25 as head of the consumer relations section of the public relations department of American Viscose Corp. Miss Schrupp is to be mar-

ried July 18 at Oregon City, Ore., to Robert Pickens of Salem, Ore., head of the fabric division of Oregon Worsted Co., Portland. Miss Schrupp was succeeded at Avisco by Mrs. Elaine Lampert, her assistant since January, 1947.

William C. Summersby has resigned as vice-president and general manager of the Ware Shoals (S. C.) Division of Riegel Textile Corp., a position he has held since August, 1942. Prior to that he was general manager of the Gayle, Eureka and Springstein plants of Springs Cotton Mills at Chester, S. C., for two years.

John W. Beaver has been appointed sales representative for the special chemicals division of Pennsylvania Salt Mfg. Co. in the territory of Maryland, Washington, D. C., and Virginia. Mr. Beaver formerly was in the Wisconsin territory.

Howard K. Houser, secretary-treasurer of Rhyne-Houser Mfg. Co. at Cherryville, N. C., has been elected president of the new Cherryville Country Club. Serving on the board of directors are Ben Rudisill and Sam M. Butler, both well known North Carolina textile executives.

Hugh Comer of Birmingham, Ala., president of Avondale Mills, has been re-elected president of the University of Alabama Alumni Association.

Robert E. Moore, carpenter foreman for the Lockhart, S. C., unit of Monarch Mills, qualified as a candidate June 18 for the South Carolina House of Representatives from Union County.

W. A. Powell has been named superintendent of Marshall Cotton Mills which has been established at Charlotte, N. C., by Leading Embroidery Co. of New York. The plant utilizes 14,000 spindles and 270 looms in the production of gauze. D. M. Williams is general manager.

Charles W. Carvin, president of Charles W. Carvin Co., Inc., New York, and national chairman of the Philadelphia Textile Institute Development Fund, has been elected to membership on the board of trustees of the Philadelphia Textile Institute Foundation. The following foundation officers recently were elected for a term of one year, ending June, 1949: Millard D. Brown of Continental Mills, Inc., president; Theodore B. Hayward, Swift & Co., Inc., first vice-president; Fred C. Scholler, Scholler Bros., Inc., second vice-president; W. Lyle Holmes, Jr., Archibald Holmes & Son, treasurer; and Russell C. Osborne, Rider-Osborne-Devine, Inc., secretary.

OBITUARIES

George W. Summersby, 57, president of the Bradford (R. I.) Dyeing Association, died at his home in Watch Hill, Westerly, R. I., June 15. Mr. Summersby was at one time manager of the old Lowe Mfg. Co. at Huntsville, Ala., and executive vice-president and manager of Spencer Corp. with offices in New York and Spindale, N. C. Surviving are his widow, a sister, and a brother, William, until recently vice-president and general manager of the Ware Shoals (S. C.) Division of Riegel Textile Corp.

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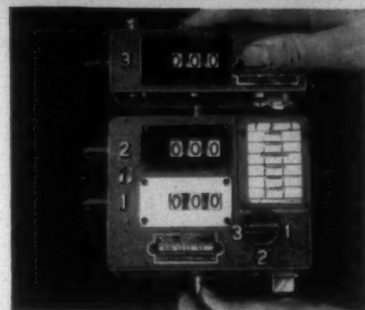
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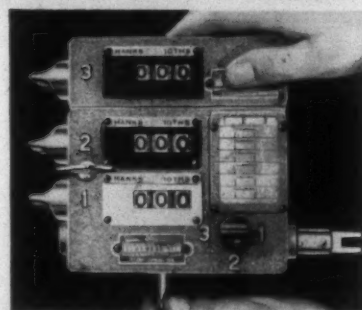
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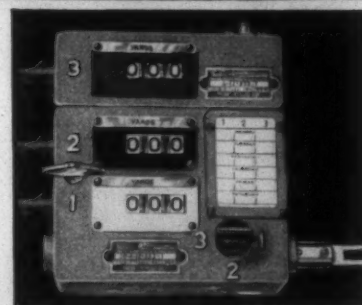
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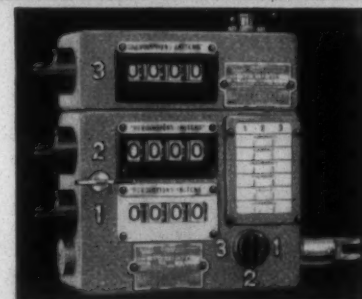
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